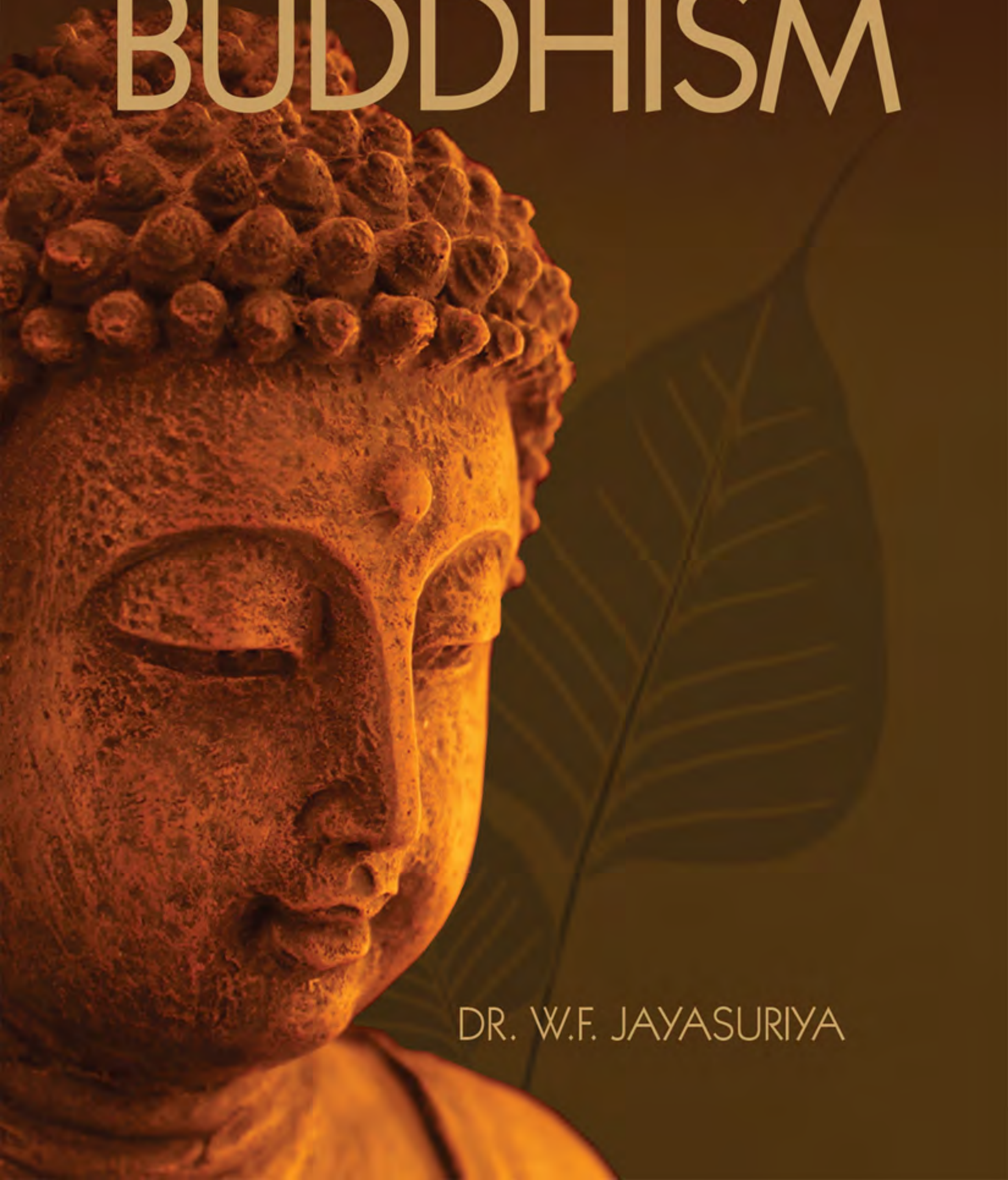
The Psychology & Philosophy of BUDDHISM



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THE GREAT STATUE OF SUPREME
BUDDHA
RAMBADAGALLA, SRILANKA.

The Psychology & Philosophy of Buddhism

(being an Introduction to the Abhidhamma.)

BY
DR. W. F. JAYASURIYA L.M.S. (CEYLON)

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This book is dedicated to my students whose appreciation of my labors has sustained me in a struggle against ignorance and prejudice .

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FOREWORD

BY

DR. K. N. JAYATILLEKE, B.A. (Hons.) (Ceylon), M.A. (Cantab), Ph.D. (London)

Senior Lecturer in Philosophy, University of Ceylon, and Author of 'Early Buddhist Theory of Knowledge,' Allen and Unwin; 'Philosophy of Early Buddhism,' Rider & Co, and Joint Author with Dr. G. P. Malalasekera of 'Buddhism and the Race Question' UNESCO.

Dr. Jayasuriya's book on the "Psychology and Philosophy of Buddhism "is the work of an ardent and learned Buddhist, who has made a special study of the *Abhidhamma* or the "higher philosophy" of Buddhism as a layman. He has culled much of his material from the well-known (but ill-understood) *Abhidhammattha-saṅgaha* and ancillary works and has tried to give a systematic and comprehensive account of these aspects of the philosophy and psychology of Buddhism. He has throughout endeavored to compare and illustrate his work with the findings of modern science and has succeeded on the whole in presenting a valuable informative and useful treatise on the subject.

The author says that the contents of this book originally consisted of a series of radio talks, which is now compiled in book form. It is written for three classes of readers, viz.: (i) those with no knowledge of Buddhism; (ii) those who have some knowledge of it; and (iii) those who have knowledge of modern philosophy and psychology. The first class would undoubtedly welcome Part One of the book, which gives an attractive summary of the life and work of the Teacher, His service to mankind, the nature of the teaching and of the order of monks and nuns.

Parts Two and Three, which form the bulk of the work, give a systematic and coherent account of the elements of the "higher philosophy" (*Abhidhamma*) of Buddhism. Lay-Buddhists are not unanimous about the value of the *Abhidhamma.* Those who like it are convinced that it alone gives an exact account of the nature of reality, a knowledge of which forms the basis of the genuinely Buddhist way of life. On the other hand, there are those who believe that it is too abstract and unrelated to the practical demands of religion and morality. The author holds the former view but does not try to defend it polemically, which is perhaps the best defense. Part Two, entitled the "Science of the Mind", deals with the main topics discussed in the *Abhidhammattha-saṅgaha, viz*., the analysis of the fundamental states of mind, the psychological factors, the material world and *Nirvāna.* Chapter IX on "Dynamic Psychology" is particularly valuable since it gives an account of the nature of thought processes, the Buddhist theory of the subconscious, laughter and dreams. There is also here a lucid exposition of the nature of *karma,* death and rebirth. The last chapter of this part deals with one of the central doctrines of Buddhism, the theory of causation, along with an account of the different types of relations.

The Third Part is devoted to a brief exposition and evaluation of the Four Noble Truths. Chapter XI deals with the first two truths, viz., the nature and the cause of life and the last two chapters with the supramundane and the means of achieving it.

There is a useful and fascinating Appendix, intended mainly for the author's third class of readers. Here an attempt is made to explain some of the psycho-physiological concepts of Buddhism in the light of modern thought. Section D of this illustrates in what sense Buddhism may be reckoned a scientific philosophy. One sees in these pages the work of an intelligent and devoted Buddhist and a deep thinker. There is no doubt that it is this devotion and courage, coupled with a sincerity of

conviction and a moral earnestness, which has enabled this learned author to undertake and complete a work of such magnitude and difficulty despite the warning of Dr. R. H. Thouless of the Cambridge University, whom he quotes as saying that "it is a very difficult thing to translate the language of Buddhist philosophy and psychology into the language of the Western reader" (*see* Preface). I would disagree with some of the observations and conclusions in this book; but it must be acknowledged at the same time that it is pioneering work, which offers scholars much food for thought, even if they do not agree with all that is said.

It is sometimes held in academic circles that books on Buddhism must be written only by specialists on the subject, just as no one but a specialist can and should write a treatise on medicine. I do not agree entirely with this point of view. Since Buddhism is not an authoritarian creed, what emerges as the living thoughts of Buddha is what is distilled through the minds of thinking Buddhists. This book is, therefore, valuable not only for the information and instruction it provides about Buddhism to thoughtful and patient readers but also because it reveals the impact of both Buddhism and modern science on a keen and inquiring mind.

Kandy, January 1963.

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I acknowledge with gratitude my indebtedness to the following:—

My teachers, Mr. Rerukane Ariyaratne, Lecturer in Abhidhamma of the Vidyalankara University, and to the late Mr. H. D. Dharmasiriwardhana, and the Venerable M. U. Sri Kaveeswara, Maha Thero of Nawalapitiya, my early teachers.

Dr. K. N. Jayatilleke, the eminent authority, whose comments in his Foreword, based on a knowledge of both Eastern and Western Philosophy, gave me great encouragement.

The Authors and the Publishers for permission to publish fifteen diagrams from "*Handbook of Physiology and Biochemistry*" by R. J. S. McDowall, published by Messrs. John Murray, and five diagrams from "*The Physiological Basis of Medical Practice*" by C. H. Best and N. B. Taylor, published by Messrs. William & Wilkins Co.

Thanks are also due to Ven. Nyanaponika Maha Thero for the thorough manner in which he perused the book and offered me valuable suggestions, and to Professor K. Rajasooriya for looking over the Physiological aspect of the contents of this book. Mr. N. G. L. Marasinghe for undertaking the laborious task of proof-reading. Mr. K. G. Ameradasa for editing when the book first appeared in the magazine, *Buddha Jayanti.*

To my sons, Laksiri and Ranjan, for their assistance in various ways. Finally, but not least, to the Board of Management of the Y.M.B.A., the printers for the concessions which enabled me to publish the book at a reasonable price and the great patience shown during the three years it took to print this volume.

W. F. J.

PREFACE

IN the year 1955, I was asked by Radio Ceylon to deliver a series of talks on the subject of Buddhist Philosophy. The thirteen talks I then gave, are now presented, suitably edited, in book form. Dr. R. H. Thouless, Reader in Educational Psychology of Cambridge University, and eminent author of several publications and text books on Psychology, to whom I gave this book for comments, stated that it was a very difficult thing to translate the language of Buddhist Philosophy and Psychology, in a meaningful way for the Western reader, and that I should have given an account of those experiences such as the Trance States earlier instead of in Chapter XI of this book.

In taking these criticisms into consideration, I have kept in mind three classes of readers: (1) those who have no previous knowledge of Buddhism, (2) those who have had some knowledge, and (3) those trained in disciplines such as Physiology, Psychology, and Philosophy.

For the benefit of those falling into the first class, I have given a general introduction to Buddhism, avoiding the technicalities of the *Abhidhamma.* To readers of the second category, part two would present no difficulties. The Appendix has been added for the benefit of the last-mentioned class in particular.

I would wish to warn the reader that although this is a textbook, originally it appeared as a series of radio-talks. As such it calls for patience and study.

In order to help the student, I have given the Pāḷi equivalents of the English terms. I have also included foot-notes and references to indicate and acknowledge my dependence on other writers in this field for some of the terms and ideas. I have given a glossary of terms of Buddhist and western philosophic thought, and a guide to the pronunciation of Pāḷi terms. I have also tried to illustrate

what has been said with fifty illustrations, many of them from books on Science.

The Abhidhamma, or the section of the Buddhist canon dealing with science and metaphysics, consists of seven books. They are: the *Dhamma Saṅganī*, *Vibhaṅga*, *Dhātukathā*, *Puggala Paññatti*, *Kathāvattu*, *Yamaka* and the *Paṭṭhāna.* These names mean: the *Compendium of Phenomena in Mind and Body*, *Analysis*, *Discussions*, *Designations of Individuals*, *Subjects of Controversy*, *Book of Pairs*, and *Book of Causal Relations*, respectively. Since it is difficult to make a study of these books without a preliminary understanding, and a succinct grasp of the subject, learned monks from ancient times have tried to fulfil that need with synopses. One such popular book is the *Abhidhammattha Saṅgaha,* compiled by an Indian monk, the Venerable Anuruddha Thero. This book is based on that treatise and its commentaries.

The value of the Abhidhamma for modern thought lies in bringing ethics into the field of science and in serving as the meeting ground of many contending schools of psychology such as the structuralists, the functionalists, the psycho-analysts, the behaviorists and the gestaltists; and of philosophies such as the idealists, the realists, the materialists; as well as the speculative and the scientific of ancient and modern philosophy.

It is not my intention to trace the history of the Abhidhamma or to refute the arguments of those who try to belittle it. It is to me so obviously the work of one endowed with supernormal faculties that I do not propose to go into the historicity of the Abhidhamma and remove doubts about its genuineness. I am leaving it to the enlightened reader to form his own opinion. If, however, any reader wants to know more on this matter, the interested reader will find a useful discussion of this question in "*Abhidharmaye Mūlika Karunu"* by the Venerable R. Chandavimala. This, however, is available only in Sinhala. Whatever the origin,

the subject of Abhidhamma provides an insight into the principles behind the Buddhist teaching, as nothing else can. So much so in the old days, it is said that a monk who spoke disparagingly of the Abhidhamma should be expelled from his abode.

"*Tathāgatas* are not born to establish moral practice. Three words containing six letters (*anicca*, *dukkha*, *anattā*), are the cause of their appearance." (*Vimukti Saṇgraha*, Verse 337)

"Those beings who on account of errors of mind, have illusions of permanence where there is impermanence, happiness where there is ill, self where there is no-self, and wholesomeness where there is unwholesomeness entertain false views. Such persons do not arrive at *nibbāna*, but are caught up in the bonds of Māra, and move perpetually in the circles of life consisting of birth, decay and death." (*Vipallāsa Sutta* in the *Anguttara Nikāya*)

May the merit of this work of mine accrue to the *devas*, to my deceased parents and relatives; and among the living, to my teachers, to my relatives, to my friends, students, and to all those who have helped me and have associated with me, in whatever manner, in this work.

W. F. J.

Colombo, July, 2507/1963

GUIDE TO THE PRONUNCIATION OF PĀḶI LETTERS

The eight Vowels: a, ā, i, ī, u, ū, e, o.

a	pronounced	as in shut never as in cat or take.
ā,		as in father or barter.
e		short as in met, pen or when followed by a double consonant, *e.g.,* ettha.
e		long as in great, prey.
i		short as in pin, it.
ī		long as in machine.
o		short as in pot, top or when followed by a double consonant, *e.g.,* ottha.
o		long as in hope, rope.
u		short as in put, full.
ū		long as in shoot, rule.

The thirty three Consonants:

k	kh	g	gh	ṅ
c	ch	j	jh	ñ
ṭ	ṭh	ḍ	ḍh	ṇ
t	th	d	dh	n
p	ph	b	bh	m
y	r	l	v	
s	h	ḷ	ṃ	

c	pronounced	as in chair never as k or s.
g	"	as in go never as j.
h	"	as in hot, never silent.
ṃ	"	as a nasal sound in sing. This is the letter used when the nasal sound is terminal.
ñ	"	as in Mignon or Signor.
y	"	as in young or in yes
t	"	as in think.
ṭ	"	as in torn, cut.
d	"	as in though or that.
ḍ	"	as in don, or did.

The aspirates of k, g, c, j, ṭ ḍ, t, d, p, b, are written along with h. Thus the pronunciation of the letter kh becomes as in pack-horse, of th as in hot-house, of bh as in abhor.

ṇ and n; ḷ and l have no difference in pronunciation but have differences in meaning.

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THE PSYCHOLOGY AND PHILOSOPHY OF BUDDHISM

(*Namo Tassa Bhagavato Arahato Sammā Sambuddhassa*)

Honor to the Exalted One! the Arahant,
the Supremely Awakened One!

PART ONE

INTRODUCTION TO BUDDHISM

THE TEACHER (*Buddha*)

Many millions of years or eons ago, a poor man and his mother were crossing the sea, when their ship foundered. They kept alive for seven days by swimming, and then gave up hope of survival. It is here the man wished to be able, some day, to ferry safely, countless millions living beings, on their perilous journey from life to life. Thus was born the thought, which culminated in the attainment of the all-knowing wisdom, referred to as the supreme enlightenment (*Sammā Sambodhi*), by the historical personage, who came to be known 25 centuries ago as the Buddha. This thought took firm root and grew stronger with each succeeding life, until in the time of the Dipankara Buddha, it was declared by Him for the first time, that the individual then living as the ascetic Sumedha possessed of great psychic power, would one day be another Buddha by the name of Gotama, and would appear on earth as the twenty-fourth (from Him) in the long line of the Buddhas.

From that time on, he started the process to perfect ten virtues called the Buddhahood trainings (*pāramis, Buddha-kāraka dhammas*). These virtues are: charity, morality, renunciation, wisdom, effort, patience, truth, resolution, love, and equanimity. Perfection of a virtue meant that it had to be cultivated, and could not be abandoned, even at

the risk of sacrificing one's possessions or one's life. This is illustrated in the stories of the recorded 550 lives (*Jātaka Kathā*) that he lived from the time of the initial revelation by Dipankara Buddha until his final existence as the Gotama Buddha.

Such was the man, who was born in the year 623 B.C. as the only son of a King in Northern India, belonging to the martial race of Sakya, and bearing the family name of Gotama. He was named Siddhattha. His mother, Queen Mahamaya, died on the seventh day after child-birth, and the baby was nursed by His mother's sister, Pajapati Gotami. He spent his early years in study and virile sports. He grew up to be a person of extraordinary charm, strength, and beauty; for nature had endowed him with the thirty-two marks of physical perfection, characteristic of a 'Great Person' (*Mahāpuriso*). When he was twenty-nine years of age, a change came over the prince. He was deeply touched by the spectacle of birth death, and suffering. When the news of the birth of a son, his only child, was brought to him, it became a trying moment. He had to decide whether he would be bound to the cares of kingship and the pleasures of a domestic life, or whether he would fulfil the task he had set his heart on, to find an end to suffering. He decided on the latter, and on that same night, he left the palace and his earthly pleasures, for the rigors of an ascetic life, to find in that life of solitude and meditation, the answer to his quest. This was the 'Great Renunciation'.

He sought first, to learn from the most renowned ascetic teachers of his time. But not finding in their teachings the end he was seeking, he resolved to go his own way. He then resorted to the direst austerities practiced by the ascetics of that time, until, reduced to skin and bone, he fell in a dead swoon. This, he then decided, was an extreme path that brought him no nearer to his goal. With bodily strength restored by means of food, and after six years of searching, on the full moon night in the month of May (Vesak) he set out to meditate under a peepul tree near the ancient city of

Gaya. He sought to understand the laws of causation of human suffering, also called the law of dependent origination (*paticca samuppāda*). Determined to conquer or to die in the attempt, there arose in him that night the end of his quest and the solution of his problem. He gave glad utterance in these words: *Aneka jāti saṃsāraṃ* . . . which are translated as:

> Many a House of Life
> Hath held me—seeking ever Him who wrought
> These prisons of the senses, sorrow fraught;
> Sore was my ceaseless strife!
> But now,
> Thou builder of this Tabernacle—Thou !
> I know thee! Never shalt thou build again
> These walls of pain,
> Nor raise the roof tree of deceits, nor lay
> Fresh rafters on the clay;
> Broken thy house is, the ridge pole split!
> Delusion fashioned it!
> Safe pass I thence-Deliverance to obtain.

(Sir Edwin Arnold in '*Light of Asia*').

It is from the time of this event that Prince Siddhattha came to be known as the Buddha.

Concurrent with the attainment of this wisdom, was experienced the assurance that it was the ultimate wisdom. The Buddha has declared that although he had various supernormal powers and insights before this enlightenment, yet as long as the absolutely true knowledge was not quite clear to him, he would not declare himself as the Buddha, the 'Supremely Enlightened One' (*Tathāgata*).

But the truth or reality was so deep and difficult in the actual realization that He hesitated to declare it to the world. Then the Brahma god Sahampati knowing this, instantly appeared before the Lord and made this appeal:

There has appeared in Magadha before Thee;
An unclean dhamma by impure minds devised,
Open the door of deathlessness, let them hear
Dhamma, awakened to by the Stainless One:
As on a crag on crest of mountain standing
A man might watch the people far below,
Even so do Thou! O Wisdom fair ascending
O, Seer-of-All, the terraced heights of Truth,
Look down from grief released upon the people
Sunken in grief, oppressed with birth, and age
. . . Let the Blessed One
Teach Dhamma. They who learn will grow.

(*Mahāvagga Pāli*).

From then on, He wandered, preaching the law, the *Dhamma*. One of His earliest acts, when there were only sixty other *arahants* or highest saints in the world, was to send them out to teach Dhamma. He, too, spent much of His time instructing His monks and nuns, and imparting to them this unique doctrine and code of discipline.

The Buddha's method of gentle persuasion, had great appeal to reason, and because of his obvious love and compassion towards all beings it also brought Him many adherents. His words, full of meaning and profitable to the hearer, were spoken only at the proper time. As He preached, so He practiced (*Yathā vādi tathā kāri, yathā kāri tathā vādi*); so that no other religious teacher could find a defect with which to condemn Him. The appeal of His teaching was irresistible. Thousands accepted it because it ennobled them (*sāmukkaṅsika desanā*). He taught not only human beings, but also gods. Hence He is called 'The Teacher of Gods and Men' (*satthā deva manussānaṃ*). On many an occasion gods from ten thousand world systems assembled to learn from Him. In fact, the numbers who attained deliverance were much larger among the gods than among men.

His thoughts were taintless, for they were not conditioned by needs of worship, likes and dislikes, false views, and other evil propensities for these had been destroyed at their very roots. He was not attached to anything, not even to His order of monks. He sought no one's love or worship. He made no distinction between the rich and the poor, or the mighty and the humble; and not even as His own and another's. Never was He given to an harsh utterance. He was the 'True Friend' of all (*kalyāna-mitta*). He had infinite patience, love and kindness in all that He did. Kindness and wisdom, in fact, are the keynotes of His teaching, which was henceforth referred to as the '*Karuna Sāsana*'. He says "all man's deeds are not worth a sixteenth part of kindness". (*Dhammapada*).

Having spent a life of forty-five years of teaching and of service to living beings, sleeping but two hours a night and caring nothing for His physical comforts, He passed away at the age of eighty years under sal trees, in the open garden of the king of the Mallas. Thus His life from birth to death, as well as His teaching, reflect a harmony with nature.

His daily exhortation to His disciples was: "Monks! do not be unmindful, rare is the appearance of a Buddha in the world; very difficult is the beginning of a human existence; difficult to get is the opportunity to do merit; difficult the chance to be a monk; difficult is the good fortune to hear the Buddha teaching." His last words to His followers were: "*Handadāni bhikkhave, āmantayāmi vo. Vaya dhammā saṅkhārā—appamādena sampādetha"*. "Monks, this I say to you with compassion. 'Impermanent are all conditioned things. Therefore, work out your own liberation with diligence.'" (*Mahāparinibbāna Sutta*).

His body was cremated with all royal honors in the presence of many kings.

HIS SERVICE TO MANKIND

The Freedoms

Buddha’s contributions to the progress of humanity, were many. Among them, the ‘Freedoms’ He gave to the world range at the top. The greatest of them, is perhaps the freedom to think. He did not put forward a set of dogmas. What He taught was simple and verifiable. His Kālāma Sutta stands as a charter of intellectual freedom, the first exposition of pragmatism. “Do not accept merely because of tradition, hearsay, nor divine communication; nor by lineage, racial or otherwise. Nor”, He said, “by possibilities; nor because something is found in the scriptures; nor by logical reasoning; nor because it agrees with axiom; nor by specious reasoning; nor because it accords with your view point. Do not accept because of a regard for another’s ability; nor because the monk is our teacher. But when you yourself have experienced that a thing is bad and blameworthy; is despised by the wise; is not productive of blessings and brings suffering; then you should reject it”.

His teachings had nothing secretive. There were no hidden meanings. They invited scrutiny and reasoned criticism (*ehi-passiko*). Reason and doubt have a place in it. The latter, however, as a thing to be got rid of. It is taught, “Right it is to doubt, right it is to question what is doubtful and what is not clear. In a doubtful matter wavering arises”. He said, “As the wise test gold by burning, cutting and examining by means of a touchstone, so should you accept any words after examining them and not merely out of regard or reverence for me”. (*Gnānasāra Samuccaya*).

He also advocated freedom of worship. “If others speak against me or my teaching, that is no reason to get angry. If you do so, you will not know, if what they say is true or false”. (*Brahmajāla Sutta*). But tolerance does not mean that one should hide the light of truth from another. The

Dhamma should be taught, when it is timely, out of goodwill and compassion, and never with bitterness.

Another is the freedom to live. Every living being is fond of life. This is universal, just as suffering is universal. Besides this universality, as of suffering, He taught of many others. One such was the brotherhood among all beings and not of men only. One cannot say how beings have been related to one another in past lives: as parents, brothers, sisters, or friends. In the meditations on the divine states (*Brahma vihāras,* see Ch. xiii) action is taken on this ideal; and one extends to all beings, regardless of their being agreeable or otherwise, friendliness or love, compassion in their sufferings, joy in their happiness, and equanimity in regarding living beings as the heirs to their own past. It is also seen in the practice of life protection or the bestowment of a freedom from harm called the (*abhaya-dāna*). In spite of "food-drives, this is yet done as an act of merit by Buddhists by the purchase and release of animals that are to be slaughtered, and by creating forest reserves for them.

Emancipation of Women

Similarly, the Buddha was the first to urge the emancipation of women. He deemed that they were as capable as men in attaining the highest state of *arahantship*. For the first time in the world, he created a special order of nuns. Some of these nuns were among the ablest exponents of his teaching. Viewed against the treatment of women before Buddha, the grim practices they were subjected to, and in fact are being subjected to even today, women owe a deep debt of gratitude to Him.

Abolishing Race and Class Distinctions

In the same vein, his disapproval of class distinctions in contemporary caste-ridden India was revolutionary. He declared:

"*Na jaccā vasalo hoti, na jaccā hoti Brāhamano*
Kammanā vasalo hoti, kammanā hoti Brāhamano"

"Not by birth does a person become an outcaste, not by birth does one become a Brahmin; but by deeds one becomes an out-caste and by deeds one becomes a Brahmin." (*Vasala Sutta*). To his order of monks, nobles and out-castes were admitted without discrimination, and they lived pure lives without such pernicious views. It is for that reason that the Harijans (untouchables) in India, in their thousands, feeling the tyranny of priests and caste, are today returning to this great religion, which the Brahmins, in order to regain their lost power, managed to foist on people. Equally, it does not admit distinctions of color and race.

'No Soul' and the Fallacy of Permanence

He espoused many other important principles which have similar far-reaching implications as his other teachings. One was: that in a universe of incessant change, there is no permanent soul, and that to believe in one is nothing more than an illusion.

He disavowed the notion of distinct unique groups, based on such characteristics as: color, class, race and nationality. This he pointed out is only a projection of the idea of soul or the ego. In the desire of such groups for dominance lies the seed that leads to wars and exploitations, he said.

In place of a soul there is the notion of a changing personality. In this respect, His teaching is similar to modern psychology and physics, which make no use of soul or entity concepts.

'No God' — Its Substitution by the Doctrine of Impersonal Natural Laws

His other unique contribution was to rescue man from dependence on the concept of 'God' and divine law for his salvation. In doing so, He taught self-help, self-knowledge and self-reverence (the word 'self' is used only as a mode of speech). He says, "Ye yourselves must walk the path, Buddhas merely teach the way".

In human beings lay vast undeveloped powers for the attainment of which they have to strive. His frequent exhortation was: "Be ye islands unto yourselves. Seek no other refuge". The path to heaven is on these lines, rather than through dependence on an unseen and sometimes even incomprehensible god. Even many western philosophers find little use for such concepts of deity (see Hospers in *Introduction to Philosophical Analysis*). Hence enigmatic questions, such as: whether 'God' could be the creator of both good and evil, do not arise.

In relation to the real problems of life, death and suffering, prayers and rites, which are childish and often degrading, are meaningless. It is only the teacher who can help. To the extent of a person's wisdom and his efforts, his future life is conditioned by himself. There is no one, either to confer unmerited blessings upon him or to punish him—"*attāhi attano nātho*", one is his own master. There is no question of begging for mercy. There is only natural justice in that the individual is himself taking a part in a process of conditioning in conformity with Natural Laws, whereby he reaps what he sows. That is irrespective of what he is: be he a Buddhist or not. If he is wise, he does not stultify himself by begging from an unseen god, nor weaken his moral fiber by putting himself in a state of dependence. On the other hand, he can find salvation by understanding these laws and acting in conformity with them. As he reaps success from his efforts, his confidence in himself and in the Teacher grows. This confidence influences his subsequent actions. In this way, it is personal endeavor or struggle that is strongly emphasized.

Explanation of Inequalities

In the teaching of *kamma*, or the conditioning by the volitions of a past, He has provided a satisfactory explanation for the existence of inequalities in the world, such as people with challenges alongside normal people; of the powerful among the weak; rich amidst poor. *Kamma* is

in no way fatalism, but the operation of a natural law. There is no resignation to an inevitable fate. Our past has given us the present, but the future, immediate as well as remote, is in our own hands.

A Rational Answer to Whether Death is the End

Rebirth and the 'cycle of life' (*saṃsāra*), which are the corollaries to the teaching of *kamma*, provide the answer to the question: 'Is death the end?' It further accounts for the appearance of prodigies and people with special abilities. Some of the irreducible facts underlying spiritualism proves the soundness of this teaching on rebirth. This teaching connects up the present life with both the past life and the future life. Within this comprehensive teaching, the origin and the end of life are dealt with.

The Significance of His Practical Teaching for Modern Thought

He has given the world a practical and scientific way of life, which is unique, and designed to accommodate many of the conflicting views of scientists and philosophers. This will be seen in the discussion of the teaching that will follow, both in this introduction and also in the body of the book itself. He has shown the way to attain better states of life by setting out a unique moral code, called the 'Noble Eight-fold Path', of which Professor Max Müller says: "All testimonies, from hostile and from friendly sources, agree that it is one of the most perfect moral codes that the world has ever known".

His teaching inspired many eminent scientists and thinkers of the world. For instance, the subject of the talk by Sir C. V. Raman, the Physicist, on the occasion of his being awarded the Nobel Prize, to the astonishment of the audience was: 'The Life of the Buddha'.

He has rescued the scientist from an endless search for the causes of effects, of which again there are causes. In the quest for causes, even if a scientist succeeds in finding the

causes of, say: the inequalities in life, in skills, in opportunities and in blessings; in the innately determined behavioral characteristics, or what happens at death, he does not end his own suffering by doing so. This is clearly a problem of philosophy. A scientist can render his services to science and to the world without jeopardizing his own future; but a moral philosophy should also form his stock. The Buddha Himself, taking a path somewhat analogous to science by investigation and formulation of hypothesis, testing, and stating new hypothesis, during the time before enlightenment, found absolute truth at enlightenment. This is a state of knowing which is more real than sense knowledge. Although the work of the Buddha was with the mind and not with scientific instruments, the aim of rational investigation (*dhamma vicaya*) remains the same. Said the Venerable Assaji to Sāriputta:

> "*Ye dhammā hetuppabhavā tesam hetuṃ Tathāgato āha*
> *Tesam ca yo nirodho evaṃ vādi Mahā-Samano*"

Which means: "If an event should have sprung from a cause, this cause the Buddha has declared. And its cessation, this too He has declared". He sets a new direction and takes the scientist beyond science to a scientific philosophy of life. He also provides a path towards liberation from the process of becoming and ceasing, or the cycle of life. His teaching has a well-directed end. Says the Buddha: "My teaching has everywhere one taste, the taste of deliverance".

He rescues not only the scientist but also the materialist from his continuous search for causes and of sensual pleasures, which, in the words of Robert Burns, are not satisfying, but are, rather, in an ultimate sense, barren.

> "Pleasures are like poppies spread
> You seize the flower, its bloom is shed
> Or like the snow-fall in the river
> A moment white, then melts, forever."

It is pathetic to see how these subtle forms of gratification of the senses, indissolubly linked to materialism, this art of make-believe, have today been made so alluring that many people are bound and divested of the will to resist them. The Buddha comes to their aid, and releases them by showing another class of pleasures, not dependent on such fleeting sensations and on changing conditions. This is a kind of aesthetic experience of a non-practical nature called 'Supersensual Happiness' (*nirāmisa sukha*). In this way, mind and matter are shown to be separate realities or systems that are not entirely dependent on each other. With that view, a satisfactory end to all our labors, which is more in the realm of the mind, is given to us.

The Science of Ethics.

Another solution of a problem that He has given to the world, is in the field of ethics. He takes ethics, or what is good or ought to be done, from being personal and indeterminate, and gives it a position among the natural laws, as the laws of past-action (*kamma niyāma*). This is moral law in a science on mind. Consequently, it shows that a person should have greater regard for mental rather than to material things. By this, *Man*, if he is to deserve that name, can no longer be free to destroy other people with impunity, merely because they hold different views. A scientist, having discovered new potential sources of destruction, has, therefore, to discharge his social responsibility to himself and to the cosmos of which he is part in a manner in keeping with his intellectual attainments. Greater a person's ability and attainments are, greater is the responsibility to utilize those powers with circumspection.

Renunciation and the Order of Monks

The other benefaction, which He has given to the world besides His teaching, and which to a Buddhist constitutes the third refuge or gem, is the order of monks. As the quickest way of achieving purity, and winning deliverance

from the endless cycle of life and death, it is the solace of many a person, who has found great disappointment in the world or has seen it as full of suffering. The fact, that even in a lay life there have been saints, shows that in this teaching and in the life of the monks, there lies the mental adjustment, the resolving of the warring and conflicting mental states of those persons, to whom the only way out would otherwise appear to be insanity or suicide.

The peaceful life of the monks, undisturbed by quarrels and disputes, was secured by certain democratic procedures, which are observed even in modern times by corporate groups and societies. Some of them are: the position of speaker or chairman of an assembly, the idea of the quorum, the debate, the secret ballot, the passing of a bill after three readings, the trial by a bench of judges, voting by proxy and many others.

THE TEACHING (*Dhamma, Sāsana*)

Within a month of the cremation of the body of the Buddha His *arahant* disciples reviewed His teaching in the 'First Convocation' (*Sangīti*). Thereafter, in order to maintain the purity and to prevent misinterpretations of the Dhamma, his followers held many such convocations from time to time. There were other ways too, by which they preserved faithfully the word of the Buddha—e.g., by engraving his teachings on stone; and by committing to written script. They also split the teaching into sections (*Nikāyas*); and created orders of reciters of these sections (*Bhānakas*). Although this teaching is profound and extensive, the Tipiṭaka, or the canonical writings alone being reckoned as eleven times the size of the Bible, it is easily understandable in its essence by simple people as well as by deep thinkers. It is in a sense cyclic, and hence, the whole ground can be covered from any point; from the middle to the end, or from the end to the middle. It can be condensed: into three words—morality (*sīla*), concentration (*samādhi*), and wisdom (*pañña*); as the Eightfold Noble

Path; as the Four Noble Truths; as origination and cessation; as the conditioned and the unconditioned; It is not a difficult teaching to accept and practice in this modern age where science has made headway, if one agrees that the life of sense gratification is not the best life.

The virtues of the teaching are set forth in the well-known stanza "*Svākkhato bhagavatā dhammo sandiṭṭhiko akāliko ehi-passiko opanayiko paccattaṃ veditabbo viññūhi"* This means that the teaching, if tested in any part, will be pronounced to be good, being a rational procedure of analyzing causes, making deductions, and arriving at conclusions. It is good in that it begins with moral conduct, proceeds with concentration and insight wisdom, and arrives at the supra-mundane mental states and *Nibbāna*, the eternal rest. It is profound and has resort to various styles of treatment of the subject (*navaṅga sāsana*), and so is comprehensive. It is in tune with the life of purity that accords with the ideal, the *nibbāna* element. With it, one can experience for oneself the relief from mental suffering and the heights to be attained in this life itself. It is possible to achieve results without delay. It is inviting, a thing of purity and beauty, onward-leading, a personal duty of wise people, to be understood and developed by each for oneself.

Buddhism is thus a personal religion and not an institutional religion, and there is little room in it for ritual and ceremony. An act done based on one's own knowledge ceases to be a rite. Much of the seeming ritual of present-day Buddhism when seen thus, cease to be blind rites.

What it sets out to do, can be gathered from this question which was put to the Buddha, and the answer He gave:

"*Kenassu nivuto loko kenassu nappakāsati*
Kisssābhilepanaṃ brūsi kiṅsu tassa mahahbhayam"
"*Avijjāya nivuto loko vivicchā pamādā nappakasati*
Jappābhilepanaṃ brūmi dukkhamassa mahabbhayanti."

—*Nettippakarana*

"What are those factors that enshroud the world, *i.e.*, of living beings? What are those that dull it? What is that which binds it? What is that which terrorizes it?"

"The world is steeped in ignorance; the world is dulled by doubt; cravings fetter it; by suffering it is terrified." The way to freedom, light, and security is along the path of morality, concentration, and wisdom (see Chapter xiii).

Since the subject of Dhamma has been treated in this book, as a science and its philosophy, according to the manner of the Abhidhamma, we shall treat it here, in the preface, from an emotive standpoint avoiding technicalities as far as possible, and keeping more in line with the Sutta teaching. We have selected this stanza for exposition:

"*Sabba pāpassa akaranaṃ*
Kusalassa upasampadā
Sacittapariyodapanaṃ
Etaṃ Buddhanasāsanaṃ"

(*Mahapadana Sutta*).

"To abstain from all evil, to arouse the unattained moral, to purify the mind—that is the teaching of all the Buddhas."

What we shall attempt to do now is to interpret this stanza. The logical rationale, or the how and the why of these contentions, can be gathered later from the book. Briefly, saying that evil should *not* be done is the same as saying that good action, *i.e.*, the practice of morality (*sīla*), *should* be done. In the phrase 'arouse the unattained moral' a special kind of moral act, not hitherto attained, is intended. This is concentration of mind (*samadhi*). 'Purify the mind' means the developing insight wisdom (*pañña* or *vipassanā ñāṇa*) of the *arahant*.

1. THE ABSTENTION FROM ALL EVIL

The avoidance of evil and the doing of moral action are two aspects of correct behavior. Stating first the evils to be avoided, or negative action, is justified on the ground that in giving directions to a traveler, the correct procedure should be, to impress upon him to avoid the wrong turnings.

There are ten evils; the morals are also ten.

THE TEN EVIL ACTS (*dasa akusala*)

The ten evils comprise thoughts, words, and deeds, and are those committed by way of the three avenues of action: body, speech and mind. There are three evil acts by way of the body: killing, stealing and adultery. There are four evil acts by way of speech: lying, slandering, using harsh words, and indulgence in profitless talk. The three evil acts of the mind are: covetousness, hatred and holding false views. Some idea of the detailed teachings regarding the quantitative and the qualitative nature of their different forms, their causative factors and their fading will be found later in the book and need not be examined now.

The realization that our actions are not entirely the result of conscious deliberation on our part but are also conditioned by factors of which we are unaware, should help to analyze our motives. When knowledge rests on such understanding, the realization that our actions are not determined by us but rather for us, resistance to evil can be made strong. A person can then consciously take part in the struggle of good and evil; resistance out of regard for a person is not usually a strong one.

VARIOUS ASPECTS OF EVIL

As Motives, Roots, or Root Causes

These evil acts have as their instigating conditions, deep in our thoughts, certain basic motives existing in the manner of roots to trees. They are: attachment or greed for objects, ill-will towards them and delusion or ignorance concerning

them. However, the most important of the several conditions or causes, of which the roots are only one, is the wrong understanding of things (*ayonisomanasikāra*), otherwise inadequate knowledge.

As Defilers of Mind

There are yet other ways besides those of the avenues of action and as motives or roots, by which evil can function or be regarded. Thus, as defilers of mind (*upakkilesas*) evils are of sixteen kinds. They are: covetousness (*abhijjha*), hatred (*vyāpada*), ill-will (*kodha*), enmity (*upanāha*), belittling (*makkha*), pretension (*palāsa*), envy (*issā*), jealousy (*macchariya*), hypocrisy (*māyā*), craftiness (*sātheyya*), obduracy (*thambha*), vieing (*sārambha*), conceit (*māna*), haughtiness (*atimāna*), infatuation (*mada*), unheedfulness (*pamāda*). These darken the mind. Since purification of thought is essential to deliverance, Buddhism may thus be regarded as a practical system of mental hygiene.

As Corruption

As states of canker or corruption (*āsavas*), evils are of four kinds: the cankers in sensuous things, in sublime things, in false views, and in ignorance.

As Grasping

As graspings (*upādānas*), *i.e.*, the more intense form of desiring, they are of four kinds: grasping; in sensuous things, in false views, in rites and ceremonies as a means of salvation, and in soul theories.

As Fetters

As fetters (*saṅyojaṅas*), that bind an individual to *saṃsāric* life they are of ten kinds: the fetter in sensuous things, in sublime things, in aversion, in conceit, in false views, in belief in rites and ceremonies, in doubt, in envy, in jealousy, and in ignorance.

As Latent Forces

As latent forces (*anusayas*) they are of seven kinds: the latent force in desiring sensuous things, in desiring sublime things, in ill-will, in conceit, in false view, in doubt, and in ignorance. These forces of evil exist in a dormant state, and on getting the appropriate stimulus can explode with violence. Consequently, one cannot be absolutely certain of the response, unless evil has been destroyed at its roots.

As Injustices

As states occasioning injustices (*agatis*) evils are of four kinds: likes (*chanda*); dislikes (*dosa*); fears (*bhaya*); and ignorance (*moha*).

As Hindrances

As hindrances (*nivaranas*), or states barring progress to the higher life, evils are of five kinds. they are: sensual desires (*kāmacchanda*); hatred (*vyāpāda*); sloth and torpor (*thina middha*); remorse or brooding over past misdeeds or acts not done, and restlessness (*uddhacca-kukkucca*); and doubt in certain spiritual things (*vicikicchā*).

Thus, like a tree laden with flowers, the subject of evil is dealt with in the Teaching in many ways.

THE TEN MORAL ACTS (*Dasa Kusala*)

The doing of morals, as stated before, constitute both the refraining from doing these evils by a volitional effort, and the doing of moral acts which are their counterparts. Thus, one can refrain from killing, and one can also give a living being protection, *i.e.*, a sense of freedom of fear for its life; or again one can abstain from causing strained feelings between people, and also cause amity and goodwill. These two aspects of a moral act can make of the ten moral acts, twenty acts.

The ten positive moral acts (*cetanā sīla*) are: giving or charity (*dāna*), moral conduct or habits (*sīla*), meditation

(*bhāvana*) respecting the worthy (*apacayana*), ministering to the worthy (*veyvāvacca*), offering merit (*pattidāna*), partaking of merit (*pattānumodāna*), hearing the teaching (*dhammasavana*), expounding the teaching (*dhamma desanā*), and rectification of false views (*diṭṭhijjukamma*).

An act can be great or small according to many conditions. For instance, in respect of giving, these conditions would include: the state of the giver such as the nature of his knowledge; nature of his beliefs and keenness; value of the things given, such as the worth; how acquired; and the merits of the recipient, such as his worthiness and need. This is like the harvest depending on a number of conditions: the seed, the field, the rain, and the farmer.

Giving or Charity

It is the parting with what is one's own either as an offering (*pūjā*) or as a bestowment (*anuggaha*). The former, applies to the acts of giving that are done to those that are superior in virtue or power to oneself. The latter is to those that are equals or are inferior. Offerings are of three kinds: With material things such as food, raiment, incense (*vatthu pūjā*); with thanks (*thuti pūjā*) such as gāthās or hymns; and with principles or sacrifices to principles (*paṭipatti pūjā*). In respect of wealth, it is not a *sine qua non* that a person should give up all his wealth to attain the fruits of the Dhamma, for there have been lay saints.

Moral Conduct

Moral habits refer to the control of evil actions through the avenues of body and speech only, but not of mind. These are the avoidance of the three evil acts of the body and the four acts of speech referred to earlier under the ten evil acts. This state of purity of speech and bodily action is an essential condition for spiritual advancement, and consequently attaining higher lives, or achieving deliverance. One strives for it in the observance of the precepts and of the Patimokkha rules of monks. See pp. 33–

34. On the Poya days, the lay Buddhist strives to keep inviolate the eight precepts or the ten precepts; and the monks recite the Patimokkha on the Observance Days. They will be described later.

Many benefits follow on the growth of these moral habits. One acquires a good reputation and even wealth. One is enabled to approach any person with confidence. One dies un-bewildered, and is re-born in the heavens. Effects are thus both for this life and the next.

These precepts do not lay down the ideal, but lead to a gradual approach to it, in an attempt at transforming behavioral patterns. Thus we have the practice of the five precepts (*kāmesu micchācāra*) which permits sexual behavior with a man's lawful wife; and the highest living of a monk (*brahamacariya*), which enjoins strict sexual continence.

Meditation

This is the endeavor to keep the mind on a moral (*kusala*) object. Since it is the habit of the mind to flit from object to object, according to our likes, dislikes, attachments, interests, worries, and anxieties, a person learns how to keep the mind away from mundane affairs, however exciting or depressing. He is then enabled to contemplate on sublime things, and be at peace and joy. The radical purification of the mind can be effected only by this practice. Hence it is regarded as the highest moral act.

Respecting the Worthy

Those who are worthy are those that are virtuous, and those to whom we owe much. First comes the Buddha, the Dhamma and the Sangha, collectively called the Triple Gem, and then parents and teachers. The form of respect can be expressed by an overt act or by conduct. It may vary in different cultures. Every practice has a right to be adopted, in so far as it has an inner meaning or significance. It may be done by putting together one's uplifted hands, by

rising from one's seat, or by recitation or song, or by thinking appreciatively of a person's virtues. Worshiping before the statue of the Buddha should be seen in this manner rather than as an act of idolatry.

Ministering to the Worthy

This is to minister to the needs of the above-mentioned worthies. Thus in relation to the Triple Gem, it is to maintain the monks by giving them the requisites and looking after them, seeing that the temples are at a state of cleanliness and good repair; towards the parents it is by providing for them in their old age and setting them on the correct path where they have gone astray.

Offering Merit

It means the reciting of the good things one has done before a person, or to the unseen gods and spirits, and inviting him or them to partake of the merit thus gained. That arouses in the hearer himself, good thoughts. This is the end in view—for merit lies in causing good thoughts and doing good actions. This is one way in which a person can usefully be in contact with his dead friends and relatives. If they be in a position to partake of such merit, they are pleased, affected by it, and afford the giver their protection.

Partaking of Merit

This is to be pleased at the good doings of the one who is recounting his deed. It also helps to dispel envy, jealousy and ill-will between persons, *i.e.*, the giver and the receiver of the merit.

Hearing the Teaching

The Dhamma or the Teaching, which when learnt, practiced, and realized, frees the individual from the bondage of the recurring deaths, sufferings, and births that constitute existence. It is the greatest blessing of mankind. Listening to it with respect is itself a meritorious act.

Expounding the Teaching

Under this category, will come not only preaching and teaching but also publication of books and other literature on the subject, and also encouraging those who do so.

Rectification of False Views

People have various kinds of wrong views, known traditionally as the ten false views. These are: (1) charity, alms, worship, offerings are not productive of any effects; (2) there are no good effects to moral acts; (3) beings who are dying here are not born elsewhere; (4) beings dying elsewhere are not born here; (5) there are neither good nor evil effects resulting from good and evil acts done to parents; (6) there is no rebirth after death; (7) there is no one who is able to speak with knowledge on this and the other world; (8) after death, the elements of the body are reduced to the elements in the world, that is all; (9) beings are defiled without cause and are purified without cause; and (10) there are neither good effects to moral acts, nor evil effects to immoral acts.

The rectifications of many such views can be included under "causing the belief in *kamma* or volitional causation." It should be our constant endeavor to remove doubts and form correct views, on such topics as god, savior, prayer, rites, soul, etc. by study, and discussion.

VARIOUS ASPECTS OF MORALITY

Basic Motives

The basic motives or root causes for such moral acts are non-attachment to persons and objects; non ill-will or goodwill towards persons; and non-delusion or correct knowledge in regard to the real nature of objects. Whether the determinants be stated as respect for life, of others' rights or a sense of justice or fear of evil consequences, they are all reducible to the three roots of non-attachment, non ill-will, and non-delusion.

Like the evils, the morals too, can assert their own influence in different ways: as the powers, the great efforts, the establishment of mindfulness, the constituents of the path, and the constituents of enlightenment. (See section on enlightenment in Ch. XIII).

Powers

The powers (*balas*) to expel evil are of five kinds: the powers of confidence, effort, mindfulness, concentration and wisdom. These five also constitute the strong but more limited influences called the faculties (*indriyas*).

Great Efforts

The great efforts (*sammappadhānas*) are of four kinds: the effort to abandon the un-arisen evils; to suppress the arisen evils; to arouse the un-arisen morals; and to develop the arisen morals.

Establishment of Mindfulness

Establishments of mindfulness (*satipaṭṭhānas*) are of four kinds: the establishment of mindfulness on the body, on feelings, on thoughts, and on phenomena.

The Eightfold Noble Path

The path constituents (*maggaṅgas*) are eight: the path constituents of right views, right aspirations, right speech, right action, right livelihood, right effort, right mindfulness, and right concentration.

Factors of Enlightenment

The constituents of enlightenment (*bojjhaṅgas*) are of seven kinds: the enlightenment constituents of mindfulness, investigation of truth, effort, joy, composure, concentration and equanimity.

Morality exerts its power over evil long before the stage of final destruction. There is a natural occurrence as an experience that is immediate. He who thinks a good thought

or does a good deed or refrains from an evil one, is immediately purified and is ennobled. The least admixture with the taint of selfishness, as the satisfaction of a personal feud or need or gain will instantly vitiate the immediate effect. The blossoming of the cause as the effect in the form of a mental and physical event, may be either almost immediate as with the path thoughts of the saints or delayed till after a period of maturation and when other suitable conditions are present.

2. THE AROUSING OF THE UNATTAINED MORAL

This refers to an act of mind, a class of moral act springing from meditation, which can generally be said not to have been previously performed by the person concerned (see Concentration, Ch. XIII). This is the attainment of a special, peaceful, and tranquil state of mind (*samādhi*). Such meditations are of two types: the tranquility meditations and the insight meditations. While both effect a cleansing of thoughts (*citta visuddhi*) through the expulsion of the defilements, in insight meditation there is in addition a leading out of the world in the direction of *nibbāna*; by a cleansing of views (*diṭṭhi visuddhi*). It is insight meditation that is intended by the third line of the stanza, namely, purification of the mind. The 'arousing of the moral' refers to the tranquility meditations. These latter are the meditations dwelling on any one of forty subjects (*kammaṭṭhānas*). They are grouped as: the ten foul states of the body at death (*dasa asubha*), the ten devices (*dasa kasiṇa*), the ten reflections (*dasa anussati*), the four divine states (*catu appamaññā*) or the *brahma vihāras*), the four formless (*catu āruppa*), the one perception (*eka saññā*), and the one analysis (*eka vavaṭṭhāna*). The insight meditations, however, are those that lead to the advent of the supramundane thoughts. They are the endeavor to understand the intrinsic characteristics of phenomena.

The detailed information on these meditations, and how they should be done, may be had by reference to the book called the *Path of Purity* or the *Visuddhi Magga*, of which there is a good English translation by the Venerable Ñānamoli. In these meditations, the endeavor is to keep the mind on a single object called the Meditation subject, and thereby to obtain a mental image symbolic of the object.

In due course there comes a time when the meditator sees a brilliant light flashing through this image. This is called the conceptualized image or the *kasina* light. In order to keep his mind steadily on this object, defilements or impure mental states have to be kept back. Chief of these are: sensual desires, hatred, doubt, laziness, restlessness, and brooding. They are called the hindrances. The *kasina* light appears only when the mind is rid of them, because the mind is then in a state of peace and joy due to this lack of excitation by the defilements. As he continues to meditate further, there arises in the meditator the trance thought called the first moral thought of the form plane. Since this is accompanied by a feeling of sublime happiness, any material loss and physical hardship in the practice of morals is more than compensated. Thus it is said:

"Oh how happily we dwell, we who have no impediments.
Feeders on joy shall we be, even as the radiant Devas."

—Dhammapada.

It is only the person who has trained himself in the purification of moral conduct (*sīla*) through avoidance of evil deeds and engaging in the positive moral acts by endeavors such as the observance of the five, eight, or ten precepts, or meditation, or by living the life of a monk, who can succeed in getting a state of trance (*samādhi*).

Persons, who are so trained and therefore tranquil, do not get upset, confused, or excited when confronted by the eight vicissitudes of life (*aṭṭhaloka dhamma*), namely, gains and losses, fame and ill-fame, praise and blame, happiness

and pain. Incidentally, these meditations leading to a calming of the mind and relaxation may have considerable therapeutic value for the stresses of modern life.

3. THE PURIFICATION OF THE MIND

This means the powerful conditioning of the mind, so that evil thoughts get less frequent, until they cease to arise even subconsciously, as in the case of an *arahant* or the highest saint. For that, the essential requirement is the development of wisdom, which is carried a stage beyond tranquility meditations and becomes the aim of the insight meditation (*vipassanā bhāvanā*). It is for this reason that we have the meditations, known as the four establishments of mindfulness (*satipaṭṭhānas*), referred to as the 'one path to deliverance' (*ekāyano maggo*).

What is the nature of these meditations? They are intended to make the individual see and realize for himself, in the tranquilized state of the mind, the nature of his material body (*kāyānupassanā*), the nature of his feelings (*vedanānupassanā*); the nature of his thoughts (*cittānupassanā*); and the nature of phenomenal activities or phenomenology (*dhammānupassanā*). *This,* in other words, is to know thyself, or the understanding of the elements and their working. He sees the interdependence, of mind and body and their reciprocal conditioning. He also sees that mind and matter though interdependent are distinct entities. In this way he understands the special characteristics of each element.

As the practice of the meditation proceeds, the meditator searches for the causes of things and he comes to understand the nature of the cause-effect relationships known as, the laws of dependent origination or the wheel of life (see p. 215). Just as the immediate past is conditioning the present, he realizes that the present life too, was conditioned by the past life; and the future life will be

conditioned by the present life. In this way, he rids himself of doubts regarding the past, the present, and the future.

He also experiences in an intimate way, the arising and the passing away of the physical and mental elements, after their momentary existence. These are followed by fresh units of mind and matter. Thus, he understands the reality of impermanence in all phenomena. He realizes that in what is momentarily changing, there can neither be a sense of satisfaction nor substantial entities such as a soul or ego. The impermanence, unsatisfactoriness, unwholesomeness, and egolessness of phenomena become clear to him.

With the maturation of this insight, the notion of an ego, the doubt in respect of the eight things, and the belief in the efficacy of rites and ceremonies, that have acted as fetters obstructing his emancipation are abandoned, and he is able to enter the path of a stream winner (*sotāpatti magga citta.*) This is enlightenment. This path thought is immediately followed by its conscious effect, the resultant thought, also called the fruition thought. This is seeing *nibbāna*; for it is the thought object of the path and fruition thoughts.

Simultaneously, with this seeing of the *nibbāna* element, three other functions are carried out. There is the understanding that a Life of conditioned elements, that constitute mind and matter, is unsatisfactory; there is an abandoning or destruction of the causes of that unsatisfactory life, *i.e.*, of the defilements, particularly of craving and ignorance; and there is a strengthening or development of that path of desireless action which consists of right views, right aspiration, right speech, right action, right livelihood, right effort, right mindfulness and right concentration. This is called the Noble Eightfold Path.

He is now as one who has entered for the first time, the stream which ends only in *nibbāna* itself, and prevents his re-birth in lower worlds thereafter. He is no more a worldling, but a saint in the Buddhist teaching or the *sāsana*. Thereafter the supramundane path thought of the

second or the once returner saint (*sakadāgāmi*); the third or the non-returner saint (*anāgāmi*), and the fourth or the highest saint (*arahatta*) arise on three other occasions, performing the same four functions that occur at enlightenment, but in a more profound way and destroying more defilements. So that with the last supramundane thought the saint has destroyed the capacity to arouse any evil thought; because their roots, grounded in illusions, are destroyed. There is no more mundane existence for him. At death, he becomes one with the infinite, the *nibbāna* element. This is the purification that is desired by the Supreme Buddha, the Enlightened One.

This *nibbāna* element is unique in that it is an uncompounded state, otherwise, a single element. It is an unconditioned element and so does not obey mundane 1aws or possesses mundane natures such as momentariness. It is, therefore, without beginning or end, and so is deathless. Its chief characteristic is given as peace or tranquility. While it serves the useful functions of the God ideal issued as beauty (*subha*), happiness (s*ukha*), permanence (*nicca*); it is devoid of those other attributes of that ideal that are irrational or do not make a difference to us. Thus, it is not a personal or a creative element; it is not described as being omnipotent and omniscient.

Some have unjustly classed Buddhism as a pessimistic religion, projecting the world as an unsatisfactory place. But when that is considered along with the third truth of the *nibbānic* state of permanence, peace and purity; of terms like joy as an enlightenment constituent (*pīti sambojjhaṅga*) and of the fourth truth as the path of happiness in working for others and for oneself, the proper view to take of Buddhism is that it is not pessimism nor optimism, but realism.

Religious Experiences

Since there are many who are interested to know what the religious experiences in Buddhism are, we shall mention

some of them now. They will, however, be again mentioned in the course of our description at the proper time.

When the mind is getting tranquilized by meditation besides experiencing the real nature of the elements, of the break-up of the atoms and the arising of new ones, a person can hear distinctly very distant and faint sounds. He can see into the remote areas of the universe. He can see and exchange thoughts with beings that have bodies made of subtle matter, such as spirits and *devas*. He can read others' thoughts either from the color of the blood, or when more skilled, directly. He may see how beings are reborn according to their deeds. He can diffuse himself through thick and solid structures, and become weightless. He can create illusory forms. He can foresee the progress of future events. These achievements are called super-intellection (*abhiñña*).

When the mind is getting cleansed of evil, in the course of the insight wisdoms, he experiences what are called the corruptors of insight (*vipassanā upakkilesas*). They are: an illumination that may extend over a large area, a knowledge that is sharp and clear, a joy and thrill the like of which he had not experienced before, a composure and ease; an upliftment, and a steadiness of the mind. They are called corruptors, because they can lead to the mistaken notion that he is now a saint. While they are milestones on the path of progress, it is only the expulsion of the defilements, with all their latent forces, that finally qualifies the person to sainthood.

Thus the teaching that is contained in the Vinaya, Sutta and Abhidhamma Piṭakas tells us what is good and evil, how they arise; in what ways they exist; and what effects they cause. It tells us of progress to the higher life, and how that may be achieved. Proceeding further, on a distinct note of its own, it teaches how the highest life of the saints may be attained. It inspires us to better action, with stories of the life of the Buddha and the saints.

THE ORDER OF MONKS (*Saṅgha*)

In order to realize the Noble Truths, win the sublime happiness of *nibbāna* and cause the ending of suffering, an individual is enjoined to practice, moral habits; exercise restraint in matters of speech and behavior and expunge evil. All these moral requisites are contained in the term discipline (*vinaya*). Those who are willing to undergo this discipline in daily life are the disciples of the Lord or Buddhists. Thus, in the real sense, one does not become a Buddhist by virtue of birth, race, country or rite. There are four categories of these disciples. The first two are the male and the female lay followers (*upāsakā* and *upāsikā*); and the other two are the monks (*bhikkhu*) and the nuns (*bhikkhunī*).

A lay follower should, as a minimum, observe the five precepts while believing in the Buddha, the teaching and the order, also called the three refuges or the three gems. Those should be his training in moral habits. The Buddha, however, did not legislate for this class. His message here does not take the form of commandments. His message merely states the natural process whereby events occur, and counsels people to follow the path for their real welfare and happiness. A monk or nun, however, undergoes a special discipline or intensive training by a certain compendium of rules called the Patimokkha. The rules are laid down merely to assist the progress to *arahantship*, but once that has been attained, the *arahant* continues to observe the rules quite naturally, and though there be violation of the minor rules, the rules lose their moral significance. It should also be noted that when a monk has been charged with an offence or violation of a rule and had been punished or acquitted by the order, does not mitigate the karmic evil effects, or the consequences that follow from the violation of the natural law—the law of cause and effect.

The term *saṅgha*, is used for the order of monks (*bhikkhu saṅgha*) and for the order of nuns (*bhikkhuni saṅgha*). Not until twenty years after enlightenment did the

Lord begin to issue the disciplinary laws of this order of monks. Then too, in His wisdom, He permitted a natural sequence of legislation to follow the committing of offence; but He ultimately placed the order of monks on such a sound basis, by setting out so perfect a code of laws, that in spite of all manner of strains upon it, such as wars and internal feuds, or any attempt to break up the order, it still stands, along with the Jain monks, as the oldest monastic order in the world.

In regards to the order as one of the three refuges, it is the arahants or highest saints that are meant. They constitute the sublime order (*paramattha saṅgha*), whereas the lesser saints and those monks that constitute the order at present, are regarded as the conventional order (*sammuti saṅgha*). Of the two orders, the order of nuns does not exist today in the lands of Theravada Buddhism.

The Term Bhikkhu for Monk

Various activities which were permissible for the laity were not proper for monks because they constituted a category of people who had renounced the world. Hence, differences have been established. The mark of a Monk is his patch-work cloth or robe which is symbolic of the beggars' rags. The term bhikkhu is defined as one who begs or walks for alms, wearing the patchwork robe, resolved to shorten the journey through *saṃsāra*. The name may be a designation by others or belong to one who is ordained by an act at which the motion is put before the Assembly and followed by three proclamations.

The Ordinations

There are two ordination levels: the lower (*pabbajjā sāmanera*) and the higher (*upasampadā*). By the first, one becomes a novitiate or novice monk or *sāmanera*. In this he shaves the head, puts on the robe, carries out many of the duties of a monk, and lives the life of a monk. However, the Patimokkha is not recited by him and is not binding on him,

except for the rules of good conduct (*sekhiyā*). He observes, the ten precepts (*dasa sīla*), and avoids the ten acts of defeat (*parājikā*) and the ten acts of expulsion (*nāsanā*). The ten precepts are: the undertaking to refrain from killing, stealing, unchaste behavior, lying, taking intoxicants, eating after mid-day, dancing, singing, playing musical instruments, seeing theatricals, donning garlands and applying unguents; using high and comfortable seats, and the use of gold and silver.

The ten acts of defeat are: killing, stealing, sexual misconduct even with animals, lying, taking intoxicants, speaking ill of the Buddha, the teaching and the order, misconduct with nuns, and holding false views.

The ten acts of expulsion are the same as the acts of defeat. When he applies, after a period as novice monk, for the higher or the real ordination (*upasampadā*), if he is over twenty years and if the order thinks that he is a suitable candidate for the higher training, he is ordained at a meeting of the order at a small ceremony. Thereafter, he has to live the life of a *brahmacarya* and will be governed strictly according to the rules of the Patimokkha. He now attends meetings of the monks on the observance days, *i.e.*, two of the poya days, takes part in its proceedings, keeps the rainy period (*vassāna*). His age or seniority in the order dates from that time. Until he is five years in that state he is called a *navaka bhikkhu*; from then until he is ten years he is called a *majjhima bhikkhu*; from then till he is twenty years after ordination, he is known as a *thera*. Thereafter he is called a *maha thera*. Until he is fifteen years he is under tutelage and remains with his preceptor. Only when he becomes a *thera* can he ordain others. Initially Buddha himself ordained the monks. Later he allowed senior monks to do that. At first it was only by the acceptance of the three refuges, later it took the form of a motion and three resolutions before the Order. Certain types of individuals are not admitted to the order, such as those effected by any of the five diseases conforming to tuberculosis, leprosy, epilepsy, cancer and

asthma. Others not permitted into the order are army officers, debtors, criminals, slaves, hermaphrodites, eunuchs, parricides, matricides and those deformed, deaf or blind. Those below twenty years of age are also not admitted.

The Life of a Monk

There are two classes of monks: the forest-dwellers (*āraññaka bhikkhus*) who follow a life of meditation (*vipassanā dhura*), and the city dwellers who follow a life of religious teaching (*gantha dhura*). While, in the main, their lives are not different in that they are equally bound by the same code (*Pāṭimokkha*), the city dwellers emphasize the imparting of religious instruction to lay people, whereas the forest dwellers emphasize the contemplative life and engage in the meditations.

Forest dwelling, however, does not mean that a monk should entirely cut off himself from contact with the laity. Lay benefactors (*dāyakas*) attend to his needs because the merit a person derives in doing so, depends on the purity of the monk; and they associate this with the rigorous life. Some of the monks engage in one or other of the ascetic practices known as the *dhutangas*, for the more speedy elimination of the defilements. There are thirteen such practices: wearing patched up robes made out of discarded material, possessing only three robes, begging for alms, begging without skipping houses, eating only in one session, eating only from his alms bowl, refusing all further food after sufficiency, living in the forest, living under trees, living in the open air, living in a cemetery, being satisfied with whatever dwelling he gets, and sleeping in the sitting position.

Those who take to a life of teaching are inspired by the Buddha's call to the monks to be merciful when the order comprised only sixty Arahants. "Wander, monks! Go out for the blessings of the many, for the happiness of the many, out of compassion for the world, for the welfare, the

blessing and the happiness of gods and men. Let not two of you go the same way. Monks! Teach Dhamma which is delightful in the beginning, delightful in the middle, delightful at the ending. There are beings, with little dust in their eyes, who not hearing Dhamma, are decaying; but if they are learners of the Dhamma, they will grow." (*Mahāvagga Pāli.*)

Attributes common to both types of monks are: the use of robes (nakedness is not allowed) shaven head, begging for alms, not taking meals in the form of solid or liquid after mid-day, not handling money, keeping the observance days which fall on the days of the full moon and the new moon, the training by the Patimokkha, the study of the Vinaya and the Dhamma, engaging in the meditations, carrying out the duties of the temple and duties towards the teachers and preceptors, the keeping of the rainy period (*vassāna*) described below. His life, thus, is one of asceticism but of such a form as to be not one of extreme mortification.

The Rainy Period (*Vassāna*)

Monks observe three months, which coincide with the rainy season in India, as a period of retreat. During this period they do not go out for alms and cannot stay away from their place of abode for more than seven nights running, and this too only for cogent reasons. At the end of this period they are given gifts along with a cloth called the *kathina civara*. From this a robe has to be made ready the same day for the monk, to whom it is assigned by the order. It confers certain privileges on the monks observing the *vassāna*. On that last day, they do not recite the Patimokkha, but do the invitation to the order (*pavārana*) to declare any fault, that may have been seen, heard, or suspected by the rest.

The Purpose of and the Principles that Govern the Life of the Monk

The purpose of leading such a restricted life was to learn the control of body, speech and thought. It was conducive to the realization of desirable subjective states to steer them away from passion, hatred, and delusion to the destruction of the cankers (*āsavas*) and to the attainment of perfection.

The principles governing this life are: 1. To place his relations with his fellow monks, and with the laity on the highest level on account of being blameless. 2. To cause ease in the maintenance of himself by not striving to acquire wealth; and so multiplying his needs nor be a strain on a single individual. 3. To secure contentment by desiring little and possessing little. 4. To achieve a decrease of the hindrances (*nīvaraṇas*) by not giving into sensuous pleasures. 5. To render growth of moral habit by confession, and acknowledgement of faults by the invitation to criticize and to find faults of transgression. 6. By the removal of private possessions, and regarding everything as belonging to the order to reduce the evils of jealousy (*macchariya*), and of envy (*issā*) 7. By the respect for seniority, irrespective of caste and class, to remove a potent cause for conceit. This, however, does not mean implicit and unquestioning obedience; for he cannot break a precept even if his preceptor asks him to do so. He cannot surrender his judgment to another. 8. By refusing luxuries, curbing gluttony, and not permitting stealing, to stop him from greed. 9. By removing all these, to allow greater freedom and more opportunity to follow the good, with energy, zest, and zeal.

The value and the effectiveness of this teaching and the discipline, when faithfully learnt and practiced, can be seen in a discourse of the Buddha to the monks, in which he compared these two, taken together, to the ocean. He said the Teaching and the Discipline had these eight similarities in attributes: 1. Like the ocean there are no precipitous

sides, but there is a gradual training; with no abruptness, such as a sudden penetration of profound knowledge. 2. Like the steadiness of the ocean, that does not exceed the bounds of the shore, the monk does not transgress any rule, even for the sake of his life. 3. Like the ocean throwing out that which is dead in it, so the Order does not live in communion with an erring monk, but will quickly suspend him. 4. Just as the rivers lose their identity in the ocean, so people, from whatever class they come, lose their former clans and names, and become simply monks, 5. Just as the volume of the sea is not effected by rain or by streams joining it, *nibbāna* is not affected, 6. Just as the ocean has everywhere one taste, this Teaching and Discipline offers the taste of freedom or deliverance. 7. Just as the ocean has many treasures, so has this Teaching such treasures as the four establishments of mindfulness, the four steps to psychic power, the noble eightfold path, the constituents of enlightenment and others. 8. Just as there are great beings inhabiting the ocean, so has this teaching the four saints.

The Nature and Function of Defined Persons in the Order of Monks

First, there is the preceptor (*upajjhāya*) under whose guidance the monk spends the first five years of his life in the order. Then there are the remaining teachers (*ācariyas*). They include the preceptor-substitute (*nissaya ācariya*), whenever the preceptor happens to stay out. There is the *karma ācariya,* who reads out the invocation to the Order; and the *dhamma ācariya* who gives instruction in the Dhamma and the Vinaya. There are the regular pupils (*saddhivihārika*) who live with the preceptor, and the remaining pupils who may have come from other temples (*antevāsika*). All the monks, except the teachers, to one another, are given the appellation 'Fellow Monk' (*sabrahmacārin*). There are rules that lay down the duties of a pupil towards the teacher, and that of the teacher towards the pupil. The attitude is that of a father to a son, and vice

versa in looking after each other during illness, in the matter of falling away from morals; and in learning.

The Organization of Monks, the Assembly and its Proceedings, the Pāṭimokkha

Monks from the surrounding areas are expected to meet once a fortnight, on days called the observance days at an appropriate place. In this assembly, an experienced monk recites the 227 rules constituting the Patimokkha (see p. 34). These rules cover even the minor details of the simple and ascetic life of a monk. If a monk has transgressed them, he must admit his error and readily accept the penalty. This confession is useful in procuring spiritual relief and strength but it does not absolve one from the effects of doing evil acts. The recitation of the code of rules serves the double purpose of keeping the rules fresh in his mind, and gives him the opportunity to avow his offence. The procedure to be followed in the assembly is truly democratic. Motions are submitted, questions are permitted, discussions and arguments take place; advocacy is permitted, and a vote taken. The vote may be by the open or the secret ballot or a form of the second method called 'whispering (the decision) in the ear'. The final decision is by majority vote. The assembly may also proceed to pass various acts pertaining to guidance, censure, banishment, reconciliation, suspension, and information. For these acts to be binding they should be passed in the presence of the offending monk, who should first be charged with the offence, made to recall, and be reproved. Where there has been interrogation and acknowledgment, the order passes the act. These acts may, if necessary, be later revoked. The offences of defeat (see p. 39) and of incorrigibility of a monk, are those that require the penalty of expulsion; the other offences may be expiated for by undergoing the punishment. Remission of punishment is also provided for, when the order thinks, that the monk is now reformed. The underlying philosophy of punishment has been more the reformation of the individual rather than retribution or

causing distress. This humanitarianism is evidenced again when the Buddha rejected the requests of His cousin Devadatta—made with a view to causing schism in the order—for a more arduous life. These were that monks should for the rest of their lives be: 1. forest dwellers; 2. beggars for alms; 3. wearers of rag robes; 4. dwellers at the foot of trees; 5. abstainers from eating flesh.

On a charge being brought against a monk, the order may decide for or against him, passing a verdict of innocence, of past insanity or of specific depravity. Occasionally it may lay the case aside, when it appears to cause a serious division in the order. This is referred to as "covering up with grass." Sometimes legal questions can be settled by resort to arbitration. Often, the punishment is to put the monk on probation, when he is not permitted to join the other monks in their collective acts (*vinaya kamma*). He cannot preach, or accept salutation and has to live separately. This is called the *parivasa* and the *manatta*.

The Buddha has Himself set out ten reasons for the promulgation of these laws. They are: (1) for the excellence of the order, (2) for the comfort of the order, (3) for the restraint of the evil minded monks, (4) for the ease of the well behaved monks, (5) for the restraint of the cankers (*āsavas*) belonging to the present, (6) for the combating of the cankers belonging to the other worlds, (7) for pleasing those outside, *i.e.* people of other faiths, who are not yet pleased, (8) for increasing the number of those who are pleased, *i.e.*, adherents (9) for establishing what is dhamma, (10) for following the rules of restraint.

The success of the early Buddhist monks, in establishing Buddhism, is attributable to the wisdom of consistantly considering the criticisms of the laity.

At the same time as setting out these rules, the history of how they came to be laid down and later amended, are given in the texts. Case laws are given in order to bring out the deviations, and to make the meaning clear. The penalty

is stated along with the rule. The mere doing of the act does not constitute an offence: as when the monk, is mad; is in extreme pain; where the act was not consciously done; or where the monk is the original offender.

On reading these offences, one is not justified in concluding, that the order was riddled with laxity, merely because transgressions are recorded; nor in detracting from the probity of the monks of that day.

The Enactments of the Pāṭimokkha

The 227 rules are classified under the following headings: the four acts of defeat, the thirteen acts that require a meeting of the order, the two undetermined matters, the thirty that require expiation and forfeiture, the ninety-two that require expiation, the four requiring confession, the seventy-five rules on good conduct, and the seven rules for deciding legal questions.

The Four Acts of Defeat (*Parajikās*)

One who has committed these cannot hope to realize his objective in joining the order, because they are basically inconsistent with the teaching. This also means expulsion for those already in the order. The four acts are: sexual intercourse; taking what is not given (stealing); depriving a human being (killing): and false claims to have attained higher and nobler states such as the trances and the paths.

The Thirteen Acts Requiring a Meeting of the Order (*Saṅghādisesas*)

The order meets and then determines what the punishment should be. Often, it is a return to the probation period or some sort of punishment. Of the acts requiring a meeting, five are for misdemeanor in the conduct towards women, two regard building a hut and a temple, two for defaming monks, two for causing a schism in the order, one against becoming inaccessible or difficult to speak to, and one against bringing families into disrepute.

The Two Undetermined Acts (*Aniyatas*)

These are offences which can be reckoned as belonging to the class of defeat or that requiring a meeting of the order according to the circumstances of the case.

The Thirty Acts Requiring Expiation and Forfeiture (*Nissaggiyas*)

These concerned the wrong use of robes, rugs, towels, storage of medicine, use of gold and silver, and bartering. The articles in question, should be surrendered to the order or to another.

The Ninety-two Acts Requiring Expiation without Forfeiture (*Pācittiyas*)

The expiation is a confession. They relate to utterance of lies, use of insulting speech, reopening legal questions already decided upon, hiding faults of other monks, bringing false accusations, and instructing nuns without permission from the order.

The Four Acts Requiring Confession (*Paṭīdesanīyas*)

They are: taking food without protest where a nun has been directing ceremonies, acceptance of food from a nun who is not a relative, going uninvited for meals to houses of families impoverished by charity, taking food at forest monasteries from people who have not been warned of the attendant risks.

The Seventy-five Acts or Rules on Good Conduct (*Sekhiyās*)

They relate to proper dress, proper walk, undignified manners in eating and drinking, inattentiveness while accepting alms, teaching dhamma with a sunshade in hand, etc.

Seven Acts or Rules on Legal Questions (*Adhikaraṇas*)

These rules govern jurisprudence within the Order.

THE ORDER OF NUNS (*Bhikkhuni Saṅgha*)

Although an order of nuns no longer exists in the Theravada lands, such as Ceylon, Burma and Siam, it would be relevant to say something about this division of the Buddha's following.

The Buddha at first refused to establish such an order despite the earnest pleadings of the Buddha's foster mother, Maha Pajapati Gotami, and other ladies. Thereupon, on being asked by the Venerable Ānanda, whether it was possible for a woman to win the highest fruit of the teaching, the Arahant state, the Buddha said that it was. On being further reminded of the obligations he had towards His foster mother, symbolic, perhaps, of men's duty to women, He yielded. Thereafter, every honor, respect and support given to the monks by lay people, had to be given in equal degree to the nuns. Equal merit accrued to people in doing so. The Lord, who knew the weaknesses, the vanities and the sterling qualities of people, however, declared that if this permission had not been given, His Teaching would have lasted twice as long. But, maybe seeing that the monks and the nuns would have to work together, he made the admission to the order conditional on nuns observing eight rules (*aṭṭha garu dhamma*). They were: (1) Respect should be paid to monks irrespective of age. (2) Nuns should not spend the Rainy Period in an area where there was no monk. (3) Nuns should ask for two things from monks; the observance day, and to come for exhortation. (4) At the end of the Rainy period a nun must invite both orders to declare as to what fault was seen, heard, or suspected in her. (5) Nuns should observe the probation discipline, when imposed, before both orders for half a month. (6) They should seek ordination from both Orders. (7) They should not abuse monks, and (8) They should not admonish monks.

The nuns had the same sort of life and ordination as the monks. They had to observe the Rainy period, the same sort of Patimokkha rules, with proper modifications taking into

account the sex difference. They were not permitted to be forest dwellers.

The Virtues of the Two Orders

The Buddha has described the foregoing thus: "*Supaṭipanno bhagavato sāvaka saṅgho, ujupaṭipanno bhagavato sāvaka saṅgho, ñāya bhagavato sāvaka saṅgho, sāmīcipaṭipanno bhagavato sāvaka saṅgho, yadidanṃ cattāri purisayugāni aṭṭhapurisa puggalā esa bhagavato sāvaka saṅgho, āhuneyyopāhuneyyodakkhineyyo añjali-karṇīyo anuttaraṃ puññakkhettaṃ lokassāti.*" This means: That the community of monks and nuns is one that has entered on the good, straight, true, and proper path. It is good, because it is in conformity with the teaching, and is regulated by it. It is straight, because it avoids tortuousness of conduct, avoiding the extremes of self-indulgence and mortification. It is true, because it has *nibbāna* as its aim; and proper, because it follows the way of those worthy of veneration. This community has the eight saints—four that have attained the paths and four that have attained fruition. On that account it is worthy of being given gifts, even from far off lands, and is deserving of a hospitality, as is shown to beloved and dear friends and relations, for they yield great returns. It is worthy of being given offerings, out of a belief in the worlds to come. It is deserving of reverential salutation. It is the incomparable field of merit, in which seeds of merit may be sown by one and all.

The Precepts

The five precepts (*pañca sīla*) are to abstain from: (1) killing living beings, (2) taking things not given, (3) sexual misconduct, (4) lying, (5) use of intoxicants (drinks and drugs). While the 'taking refuge in the dhamma.' would include five, eight or ten precepts, yet as a practical measure the daily observance of five precepts is expected of every Buddhist as being his minimum virtue (*sīla*). They should be accepted and observed, not as a commandment, whose

violation is sin, but on account of its beneficial aspect and in acknowledgement of the position of the teacher.

The formula, of taking refuge in the three gems, for the first, the second, and the third time, along with the recital of the five precepts thereafter is done by a Buddhist as a preliminary to starting proceedings at gatherings of Buddhists.

The practical value of these principles in permitting good neighborliness has been taken advantage of by Sri Nehru of India, to promote peaceful co-existence between nations in his now famous ‘Pancha Sheela’ formula.

The Eight Precepts (*Aṭṭhāṅga Sīla*) include the first five as well as: (6) eating after mid-day, (7) singing, dancing, music, seeing theatricals, using garlands, perfumes, unguents, and ornaments; and (8) use of high and luxurious seats.

On the days of the new moon, the waxing moon, the full moon, and the waning moon, and known as the *poya* or the *uposatha* days, Buddhists, who have decided to spend the day in the holiest manner, recite these eight precepts in addition to taking the three refuges.

PART TWO

The Science of the Mind: a Psycho-Physical Analysis.

CHAPTER I

THE ABHIDHAMMA

BUDDHISM as a religion or as a science is unique in the importance attached to philosophy and metaphysical inquiry. As such it is often regarded as the most advanced of the philosophic systems of India. It is, however, so fundamentally opposed in so many important particulars that it would be more proper to regard it as a distinct science, which alone can satisfy the scientific mind. Ethics, science, and philosophy are delicately interwoven into a system which is godless and soulless, and which attempts to unravel the mystery of life. There is no aspect of the Buddha-Dhamma, or the Buddhist teachings, which does not stem from the logical and rational foundations of that philosophy. It meets the requirements of critical thought and intelligent people, in ways that character and worth of a religion should be determined, not by the emotions aroused, but by its content. Hence, it is not too much to claim that in this scientific age, a knowledge of Buddhist psychology and philosophy is absolutely essential for the Buddhist. Indeed, it is said in a commentary called the *Atthasālinī*, that he who knows *Abhidhamma,* or higher Buddhism, is the real exponent of the *Dhamma*, and he who knows not, is only a talker.[1] It is this integral aspect of Buddhism that we shall be concerned with in this and the subsequent chapters.

The Goal and the Path

Buddhism may be defined as a way of life, called the Noble Eight-fold Path, leading to a goal called *Nibbāna*.

[1] *Ābhidhammika bhikkhū yeva kira dhammakathikā nāma, avasesā dhammaṃ kathentāpi na dhamma kathikā.*

This goal or deliverance[1] is the state of supreme good, because it is free from defects, and has permanence, peace, purity, and the highest happiness[2] that our minds can conceive. Yet, it is something which cannot be conferred by another, however exalted he may be, but must be won by his own effort, It must be won by freeing the mind from all illusions (*vipallāsa dhamma*).[3] For this attainment, three things are necessary. They are study, practice, and realization.[4] Study or inquiry is of the first importance. There is no more opportune time for emphasizing its value, than when Buddhists are casting about for the best ways of celebrating the Buddha Jayanti, or the 2500 years of the passing away of the Buddha.

The Buddhist Canon — Its Divisions

Now, this course of study is essentially one of inquiry into the complexities of the three components of the teachings that are known as the *Sutta Piṭaka*, the *Vinaya Piṭaka* and the *Abhidhamma Piṭaka*. These three components are called the *Tipiṭaka*, or the three baskets of the Buddhist doctrine.

The *Sutta Piṭaka*, or the Basket of Discourses, abounds in the teachings of the Buddha to lead the good life by the cleansing of one's thoughts, in the form of narrative. It is a general teaching, suited to various character types of beings, in order to free their thoughts from all manner of false views. It is the basis of the Buddhist ethic. On the other hand, the *Vinaya Piṭaka* or the Basket of Discipline,

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[1] Deliverance is from the mundane type of existence.

[2] See nature of *nibbāna* pp. 177–180 and the happiness in *nibbāna*, pp. 97, 248–250.

[3] See text together with notes and illustrations on pp. 52–54 and Ch. XIII especially pp. 268–270 for the method.

[4] These are called in Pali: *pariyatti*, *paṭipatti* and *paṭivedha*. See also p. 277 n. 1. The emphasis is first on study, without which there can be no self-criticism and correction.

specially addressed to monks, gives them a code of practice for the ascetic way of life. It serves to expound the discipline and rigorousness of living, necessary to achieve a purity of morals, guided by rule and precept. Hence, it is called, the teaching by precept (*ānā desanā*). These two aspects of the doctrine are written in a direct and a familiar idiom, or conventional language (*vohāra vacana*), such as man, animal, body and mind, which is easy to comprehend. While there is depth of thought, there is no subtlety of meaning.

However, the *Abhidhamma Piṭaka* or the Basket of the Higher Teaching, which contains the teachings on science and philosophy, is written in an idiom, that is intricate, subtle and full of technical and scientific language (*paramattha vacana*) such as elements, units and relations, but suited to the subject matter of its inquiry, namely, the nature of things themselves, and why things happen as they do. The word "*abhidhamma*" itself means, special (*visiṭṭha*), complete (*atireka*), or highest teaching (*adhika*), being that which comes to grips with the reality of things. So in *abhidhamma*, we speak not of men, animals, or houses, but of the elements, which singly or in combination constitute these complex phenomena of mental and physical events and of masses, fields, faculties, truths. Hence, it shows in theory why it is not proper to arouse defilements of lust etc., when there is no entity or person but a mass of elements. Likewise, the chemist does not talk of salt in his inquiries, but of sodium and chlorine atoms or the more elementary particles that constitute these atoms. What is more, like any scientist, the scholar of *abhidhamma* engages not only in the analysis of phenomena but also in the understanding of the synthesizing of the various thoughts and atoms.

The Four Categories of Elements

All this serves to give us more profound understanding and greater intellectual awareness of the nature of things and of being. To achieve this, the subjects of all the higher

teachings are first put into just four categories of elements — cognition, mental factors, matter, and *nibbāna*. These four groups of elements are the reals[1] in phenomena, because they exist (*vijjamāna dhamma*) and perform particular functions.[2] The first three groups are mundane: exist on account of cause; and are of momentary duration. The last group is supra-mundane, existing without cause and hence eternal. They will be dealt with in that order.

WHAT IS ABHIDHAMMA?

(a) AS SCIENCE (PSYCHOLOGY)

Since *abhidhamma* is both a scientific treatise and a metaphysical discourse, we propose first to discuss *abhidhamma* as a system of science. In brief, Buddhist science is a study of the constitution of a living being and the working of its organic processes. The constitution of a living being, refers to those masses of elements, which makes up a person's mind and body. In this analytical study the kind of questions investigated by the Buddha were: What is the nature of the constituent elements? How do they combine to form the various units of mind and matter? What effects do these elements have in combination? What are the conditions under which these units appear and disappear? Can we classify them? And lastly what principles or natural laws govern the operation of these elements? On the other hand, the study of the organic process is the study of bodily and mental process, working to common ends or goals. This concern is not so much analytical but systematic in that the pervading question is

[1] *Paramo uttamo aviparito attho paramattho*. The term *paramattha* means the highest, essence, ultimate, non-changing nature.

[2] Thus the psychic element of attachment arises causing an attraction in the object; the physical element of cohesion causes a binding of the elements within the units. See also p. 67, and p. 67 n 2.

not merely "what" but "why" and "how". So the inquiry is not only, what is birth or death, but also why this living being came to exist and how it differs from others around him, and the orderly sequence of events.

Contemporary science too, adopts a similar program of inquiry especially in the distinction between "what" and "why" and "how" questions.[1] Yet an important difference lies in the ends sought by different lines of inquiry. The study of *abhidhamma* is directed, in addition to these, to the understanding of effects that are harmful or beneficial to one, and also to winning *nibbāna*, the highest benefit one can aspire to.

The Buddha, as an investigator, was not wedded to experimentation by empirical methods, as is the case with modern science. His method was logical and intellectual, with the aid of the sixth sense or mind.[2] Incidentally, this latter claim, may possibly be accepted by modern science after all, if we recognize the recent work of Dr. Rhine of Duke University on para-psychology or extra-sensory perception.[3] Consistent with the claims of the para-psychologists, is the fact that the Buddha's mind was so trained and developed that it was more sensitive and superior to the function of the other senses.[4] It is on account of this that the Buddha claimed for Himself and for some of His disciples the power to look back down the past ages and

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[1] Toulmin S. *Philosophy of Science*. Hutchinson University Library, 1954. Cohen M. R. and Nagel E. *Introduction to Logic and Scientific Method*. Routledge, Kegan Paul Ltd. London 1951.

[2] This is the thought process in the mind avenue (*manodvāra vīthi*). See p. 189 n. 1. This method is psychological empiricism.

[3] J. B. Rhine. *New Frontiers of the Mind*, Pelican, 1950; and *The Reach of the Mind*, Penguin.

[4] The mental object can only be seen in the avenues of the mind. See p. 108–110.

forwards into the distant future.[1] However different, the Buddha's procedures may be from those of Galileo, Newton or Einstein, the remarkable fact is that long before the advent of modern science, the Buddha was able to foreshadow its present findings.

(b) AS PHILOSOPHY

Beginning with a study of the facts of life, Buddhism proceeds to its philosophy on that evidence. It is not a speculative philosophy. Abhidhamma, even as metaphysical discourse, has much in it that may be called scientific philosophy. This pertains to assertions about the general features, which characterize conditioned phenomena (*saṅkhata dhamma*), or events that have been brought about by cause, and whose individual features were considered under Buddhist science.[2] Now, the notion of conditioned phenomena maintains the deterministic position of most contemporary scientists that no event is without a cause[3]; and if we did not believe in causality there would be no science and no Buddhism. The occurrence of an event, the

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[1] The mind is a distinctive non-physical system capable of producing a physical effect that can transcend the barriers of time and space. The relation of what is called psycho-kinesis (P.K.) to extra sensory perception (E.S.P.) powers in which much research is being done in the West is explained well in *abhiññа* (p. 190 n. 3). The term *iddhi* also covers these abilities. Though they may be had at times by ordinary persons as a peculiar gift, they can be acquired in *abhiñña* or superintellection. Its occurrence in a thought process is described in p. 190 n. 2 & n. 3.

[2] All phenomena are considered from two aspects: as bearing individual characteristics (*paccatta lakkhana* or *salakkhaṇa*) that makes one thing distinct from another; and as bearing general characteristics (*sāmañña lakkhaṇa*). Both these are realized during the insight meditations (see p. 270 n. 1.), on full understanding.

[3] This is not a denial of what is taken to be free will. See p. 80 n. 4 and p. 188 n. 2.

Buddha says, is from a multiplicity of causes, otherwise causal relations, some of which are internal or subjective or within your own self and others are external. That is to say, there are several facts attendant on the arising of any event or phenomena. It is, indeed, the unique achievement of the Buddha, to have perceived this truth so long ago as 2,500 years. But the Buddha claimed in addition, that there was one unconditioned or the uncaused element, namely *nibbāna*, which comes into its own, only when we have understood the conditioned elements (see section on insight meditation, Chapter XIIl).[1]

In respect of the three forms of Philosophy, regarding phenomena otherwise being, namely, Idealism, Materialism, and Realism Buddhism falls into the class called Realism.[2]

The Three Marks (*Tilakkhaṇa*)

Here it is pertinent to consider what are the general features of conditioned phenomena (*sāmañña-lakkhaṇa*). Amongst them are three important characteristics. First, there is the mark of impermanence. This indicates that things are in a state of flux or have the characteristic of transitoriness. The second mark is that of infelicity, which points to the unsatisfactory nature of such impermanent things, because fear springs in the changing of things. This mark is clearly manifest in changes to old age, in the occurrence of illness and accident, death, and sorrow. The third mark is that of impersonality, which denotes the absence of any enduring or all powerful substance such as an ego or soul, because of the very impermanence and infelicity in all conditioned things. In the Buddhist teaching we refer to these three marks, as *anicca*, *dukkha*, and *anattā*.

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[1] The *nibbāna* element is unconditioned but the path to it, i.e., the supramundane thoughts, are conditioned; see especially pp. 268–269.

[2] In common with science and common sense.

The Densities and the Illusions

Yet as worldlings, we fail to see these marks because our clear vision is obstructed by four densities or crowdings[1]

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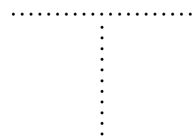


Fig. 1. Diagram illustrating the density of continuity. Thus what is seen as a line to the naked eye is seen as separate dots when seen through a lens.

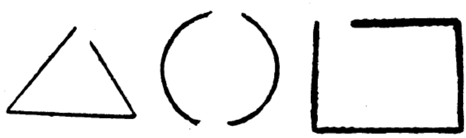


Fig 2. Diagrams illustrating the density of whole. Thus we see these geometrical shapes as a triangle, a circle, and a square, although they are not complete. There are only parts.



Fig. 3. Diagram illustrating the density of function. Although in taking a step we are making many movements yet it is seen as one action.

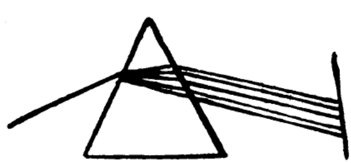


Fig. 4. Diagram illustrating the density of object. When a white light is sent through a prism it splits up into the rainbow colors. Although, we have the illusion of a single color, yet it consists of

(*ghana*): of continuity, of whole, of function, and of object. These give rise to illusions or errors (*vipallāsa*)[1] by three

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a number of colors. These four densities bear resemblance to the four patterning tendencies of western psychology called: continuity, closure, proximity and similarity.

The above four densities (*ghana*) are called the density of continuity or unbrokenness (*santati ghana*), the density of whole (*samūha ghana*), the density of function (*kriyā ghana*), and the density of object (*ārammana ghana*). That of continuity is the seeming existence in time of mind and matter as continuous things, but the truth is a momentariness in all things. Thus, if a torch be whirled we shall see it as a single ring of light. The density of whole (*samūha ghana*) is the notion of wholeness of the body whereas it consists of parts and units. Thus when we say a hand, it consists of fingers, palms, joints, etc.; or when one imagines a chariot it consists of many parts. The density of function is the acceptance as one function in an action which has a number of actions or functions. Thus, in moving a leg forward, though seen as one action, there are many actions in it. The foot is raised, thrust forward and then put down. The density of object is the acceptance of oneness in kind, whereas it is not so. Thus the object can be divided at first into six kinds and then into an infinite variety in each kind. Consequently, when an object is seen as red, there are a number of shades in red, and any number of sizes and shapes.

[1] On account of such densities, distortions of three functions of the mind, namely, knowing, noting and opinion formation occur, and are called *citta vipallāsa*, *saññā vipallāsa* and *diṭṭhi vipallāsa*, respectively. These three in respect of each of the four false notions in mundane things, as permanence, happiness, wholesomeness and self make 12 illusions. The liberation from these illusions is the key to the attainment of *nibbāna*. They are corrected in stages as a person proceeds to the *arahant* state. See also insight wisdoms pp. 268–269.

functions of the mind, i.e., by knowing, by noting and by idea formation as to create four false notions of permanence (*nicca saññā*), wholesomeness (*subha saññā*), happiness (*sukha saññā*), and self[1] (*attha saññā*), in what are

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Visual Illusions of pattern and size resulting from Errors of Sense Perception.

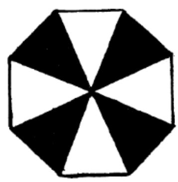


Fig. 5 The *Fig*ure may be seen as a white cross on a dark background or as a black cross on a white background. Though the stimuli are identical, the judgments differ.

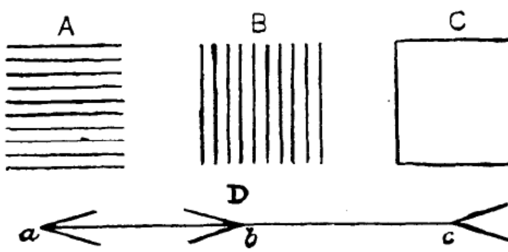


Fig. 6 The point *b* is equidistant from points *a* and *c* but seems nearer to *a* on account of the arrows A and B and C are all of the same height, width, and they appear different.

1 The general or conventional use of the term, 'soul' does not necessarily mean that it is true. This and the confusion resulting therefrom, is illustrated in the following:— When a person says, "I am 6 feet tall," the self or soul is identified with the body (*rūpa*). When he says, "My body is painful," the self is taken as separate from the body. When he says "Hardness arose in me," the body is made dependent on the self. When he says, "I exist in the nature of Hardness," the self is made dependent on the body. As with the body the self can be tied up with the noting (*saññā*), feeling (*vedanā*), formations or volitions (*sānkhāra*) and

essentially impermanent, unwholesome, unsatisfactory, and without self.

Thus, the familiar optical illusions are not the sole errors by mind.

The Four Noble Truths (*Catu-Ariya-Sacca*):

On the basis of these three marks or universal concepts and propositions regarding conditioned phenomena, and the teachings in respect of error, four principles or generalizations on the life of living beings are deducible. These are known as the Four Noble Truths, and relate to life or suffering, the cause of suffering, the cessation of suffering, and the way to the cessation of suffering. They constitute the pivotal or central teaching of Buddhism. The First Noble Truth states: that life, constituted as it is by conditioned elements, is unsatisfactory or ill. The Second Noble Truth states that life itself comes into existence, chiefly on account of cravings. The Third Noble Truth concerns the unconditioned element called *nibbāna*. This is a state of freedom from suffering in all its forms, and is the supreme good, experienced upon the complete ceasing of craving. Lastly the Fourth Noble Truth states that the way to achieve or arrive at that state of *nibbāna*, is to cause the cessation of craving by the practice of a way of life defined by the Noble Eightfold Path.[1]

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cognitions (*viññāna*). These make the 20 kinds of illusions regarding the self (*sakkāya diṭṭhi*). This soul concept, that Buddhism denies, is that there exists something of the nature 1. of a self-willed master or owner (*sāmi*), 2. of a doer, getting the body to do various things (*kāraka*), 3. of an experiencer (*vedaka*), 4. of an immortal resident in a body, that perishes at death in each life (*nivāsi*). The vagueness of, what is the soul, has resulted in it being the butt of jokes, such as being 'something to be spoken of on Sundays and discarded for mind on weekdays.'

[1] As with several systems of Indian philosophy, where the liberation of the soul is by a knowledge of reality, so too in

How the study of *abhidhamma* leads to the goal

The errors, the illusions, the wrong beliefs, the superstitions are other names for ignorance (*avijjā*). It is because of them that people slump, and do not progress. It is the cause of the suffering of existence. The way to rid oneself of ignorance, is to develop the opposite nature called wisdom (*paññā*). This wisdom is not only the wisdom of logic and reason, studied in its two forms as science and philosophy, but also the insight wisdoms, which are based on that, and are achieved through meditation. The *abhidhamma* teaching—in so far as a study can help, by the analysis of the living being, first, as mind and body; and then into the elements—helps to free a person from the illusions, which alone bar him from truth. Hence, a person should engage in these practices, and lead the Buddhist way of life, secure in the knowledge that, theoretically, its teaching is the truth.

Buddhism is the path, or the way defined by the Buddha, out of His wisdom and compassion, for the benefit of all living beings. It is the path of knowledge, right mindfulness and right conduct. It is a way free from error and defects, and one which works at all times, in all lands, in the interest and welfare of all living beings. The adoption of this way requires trust and confidence (*saddhā*) in the ability of the Buddha as a teacher. But the Buddha demanded of those who wished to follow him, to accept Him not by authority or mere credulence, but only by conviction, or acceptance subject to confirmation. The rejection of dogma and authority[1] means, that we must test the teachings by reason and experience as well as the accumulated knowledge

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Buddhism it is held that deliverance from the mundane is by a knowledge of reality called "seeing things as they really are" (*yathā bhūta ñāṇa dassana*). This deliverance, however, is not that of freeing an imprisoned soul but of arousing the wisdom of the supramundane thoughts that realises these truths and illusions.

[1] See p. 146 n. 1.

acquired for us by modern science, for Buddhism also is a science, and is not in conflict with established facts.

The general aim and scope of this book

How shall we begin this study of the living being? We propose to do so by giving some general idea of the nature of the "reals" or the elements that compose the living being; and then of the field or the surroundings in which they operate—otherwise, the universe. That will be economical of effort. We shall then take up the study of the first two groups of reals. They are the cognitive element and the non-cognitive elements or the mental factors that together constitute the mind. We begin that, with the classification of thoughts in Chapter III. In Chapter IV, we deal with certain parts of the body-mind mechanism, such as feelings, motives, functions, responses, objects, and bases. These are necessary to understand the sub-classification and to explain the interacting mechanism of body and mind. In Chapter V, we study the different kinds of thoughts and in Chapter VI, the different mental states such as love and hate that can arise in them. In Chapter VII, we begin the study of the third group of reals, the material elements or the physical body of a living being. The fourth group of reals, or the goal to which activity should he directed, is the *nibbāna* element, and is dealt with in Chapter VIII. But there remains a group of non-reals or the Ideas, which also has to be explained, if our understanding is to be thorough. This is done at the end of Chapter VIII. In Chapter IX, under a heading Dynamic Psychology, we deal with subjects, such as the perceptual processes, ideo-motor action, sub-consciousness, rebirth, dreams and the suppression of evil. From here we proceed to study in Chapter X the different kinds of relations in causal conditioning. This concludes the section on Buddhism and Science.

The section on Buddhist Philosophy, deals with the implications of the scientific study of the reals and the non-reals, in their religious import. These are the Four Noble

Truths, and they constitute the central theme of Buddhism. Of them, in Chapter XI, we come to conclusions regarding life in general, and why that life comes to be. Chapter XII deals with the goal of life. In the last chapter, is described the way to the attainment of that goal, or the ethical code.

To these has been added an Appendix, in which an attempt has been made at a clarification of the Buddhist views on the ‘seat of the mind.’ In that connection, we have also tried to correlate Buddhism with modern physiological teachings.

CHAPTER II

THE ELEMENT AND THE UNIT

Mind and Body as streams of units

As in science, Buddhism too teaches that the reality in mind and matter is something different to what is apparent. This reality or the ultimate things of which mind and body are composed are the units of mind or thoughts (*sampayutta dhamma*),[1] and the units of matter or atoms (*rūpa kalāpa*). Our scientific study begins with the nature of these units in mind and matter.

Units of Mind

Mind refers to an object as does the word brain, though to an unfindable one, because mind and matter are very different from each other in some ways. The terms, mind and body, are only a shorthand way of referring to certain vanishing states, that are but ever ceasing states of great rapidity, but nothing more. The life or duration of each separate state or thought unit is so brief that in the time taken by a flash of lightning, millions of these units would have arisen.[2] This is described by three similes, as millions

[1] Whately Carrington has put forward an atomic theory of the mind and used the term "psychon" therein. There is also the 'Mind Stuff' Theory. J. S. Mill used the term 'Mental Chemistry' for procedures analogous to chemical analysis.

[2] **The Stream of Conscisousness**



Fig. 7 Diagram illustrating the flow of thoughts. These thoughts are extremely fast and arise in orderly succession as in single file. There is only a single stream of thoughts to an individual. This flow or arising of states in quick succession, cannot be broken except in the state of 'cessation-of-thought' (*nirodha samāpatti*),

of units occurring in the time of, (1) the batting of an eyelid, (2) a flash of lightning, or (3) the snapping of two fingers. Thoughts or the units of mind, cease with far greater rapidity than units of matter. In fact they are generally 17 times faster.[1] These thoughts continually keep on arising and disappearing in much the same manner as William

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the life of unconscious beings (*asañña sattā*) and in the *nibbāna* element.

[1] The relation between the life of a unit of mind and of matter. A thought unit has a duration of life called a thought moment (*cittakkhana*) which itself has three equal phases called arising (*uppāda*) marked (a), staticity (*ṭhiti*) marked (b), and ceasing (*bhaṅga*) marked (c). These small durations are called the lesser moments. The duration of a physical atom is generally the equivalent of 17 thought moments or 51 lesser moments. Of these the rising and the cessant phases of matter have each a duration of a lesser moment. The static period is therefore 49 lesser moments.

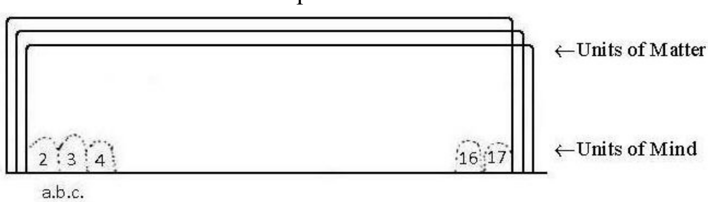


Fig. 8. Diagram illustrating the duration and the phases of the life of units of matter relative to units of mind. The diagram, in which the units of mind and matter are drawn in respect of time, shows the life duration of a physical atom to be the equivalent of 17 thought moments or 51 lesser moments. Such physical atoms which are ever undergoing change and never static, from the time of birth to its death, are arising at every moment of our lives and have a certain time-relation (not a physical relation) to the phases of the thought units of the stream of thoughts. See p. 170 *Fig.* 19 and p. 172 *Fig*. 20.

Science is in its complete agreement with this view of change. Professor David Bohm in '*Causality and Chance in Modern Physics*', Routledge and Kegan Paul, 1957, states "In nature nothing remains constant. Everything is in a perpetual state of transformation, motion and change."

James' notion of the stream of consciousness.[1] This continuity or progression of thoughts can only be broken in some special states of trance. Generally, it can be said that it had not been broken in an infinite number of past lives. Hence, a life is but a moment in this timeless and beginningless stream of thoughts.

The thought unit exists along with the thought object as if bound to some image, and never apart from it.[2] Reals, as well as unreals such as concepts, or ideas become thought objects[3] to these units.

Units of Matter

The reals in matter also, exist in the form of units, otherwise atoms. They are all, with the exception of the intimating atoms (the equivalent of the nerve impulse) and the phasic elements, longer lived than thought units. Some of these atoms split off other atoms in each moment of its life of 17 moments. Those daughter atoms in turn split off yet other atoms. This goes on four or five times with each parent atom, so that, unlike the mind, several of these streams of units of matter and their daughter atoms are co-existant, i.e., superimposed on one another.[4] In the case of

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[1] James, William, *Psychology, A Brief Course*. Ch. XI. H. Holt & Co.N.Y. 1945. A torrent and a flame are the metaphors by which the flow of thoughts has been described in Buddhism ("*Nadi soto viya*").

[2] Even in states of deep sleep, thoughts taking a thought object, keep on arising. This emphasizes the essential solidarity between the knowing subject and the object that is known.

[3] For what the objects of thoughts can be see pp. 108–110.

[4] **The Flow of Matter:**

The existence of the physical body is of a whole mass of streams of atoms or units of matter, of different kinds of causal genesis and of momentary duration. Thus we get streams of atoms born of energy, of nutrition, of past-action, and of thoughts. Some atoms are exact reproductions and so form the series or the

matter because of longer life than mind there is impact between physical units.

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santati; others are different due to interaction between external and internal atoms. When the causative influence alters there is a change in the atoms that are caused thereby. At any instant, these atoms are in different phases of existence; some units are in the phase of arising; some are in the phase of staticity; and some are in the phase of ceasing, so that the total quantity at any moment remains approximately the same.

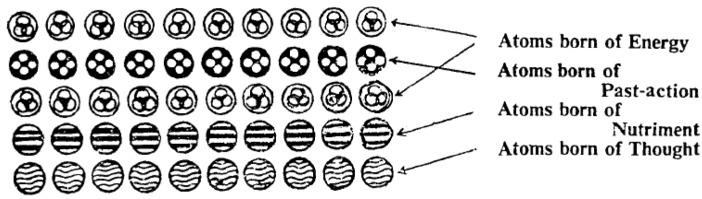


Fig. 9. Diagram depicting the succession of atoms of different causal origin. The diagram illustrates the reproduction of atoms of different causal origins. Each unit here represents a single primary atom. A primary atom itself is subjected to development as explained by p. 174 *Fig*. 21. Within the duration of the existence of a primary atom causes could effect a transformation, leading to the production of a cascade of other atoms.

If we should take a cross section of a minute part of the body (solid or fluid) we may represent these different atoms at any instant thus:

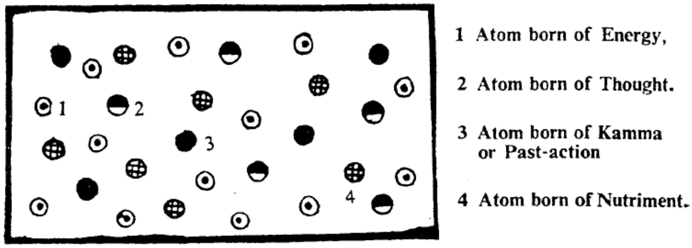


Fig. 10. Diagram to illustrate the different kinds of atoms as seen in a cross section of tissue or fluid. Of these the majority are those due to energy and nutriment while those due to past-action and thought are few.

Now, the units of mind do not exist independently of matter. They arise dependent on certain kinds of matter, called atoms born of past-action. This is like a lotus springing out of and yet dependent on the water[1]. Of the two, mind is by far the more important to the living being, because it directs life and acts to improve it. Furthermore, it can generate some kinds of matter[2] such as the intimating elements (nerve impulse), which in turn can condition or influence the material body as to make for mobility of the living organism. Our conception of mind and matter is of two parallel systems, but inter-dependent and inter-acting

[1] There is thus a relation of a dependence but not of mixing of mental and physical elements. These relations are called the dependence (*nissaya paccayā*), and the dissociation (*vippayuttha paccayā*) relations. See pp. 222, 224. Mind is thus not a byproduct of matter.

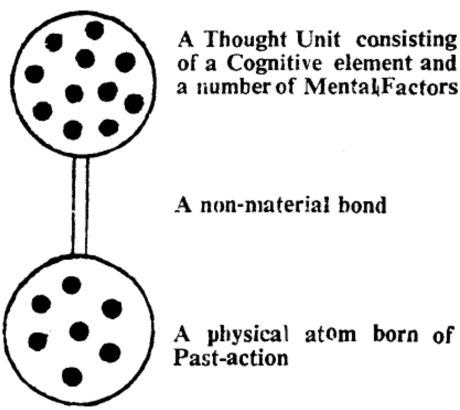


Fig. 11. Diagram to illustrate the dependant existence of mind on matter. A thought unit consisting of a cognitive element and mental factors arises dependent on a physical atom born of past-action having either a sensitive element (*pasāda rūpa*) or the mind-base element (*hadaya rūpa*.) Two such atoms are called the eye decad (*cakkhu dasaka*) and heart decad (*vatthu dasaka*).

[2] These are the atoms born of thought (*cittaja rūpa*) and the atoms born of past-action (*kammaja rūpa*). See p. 202.

on each other, where a change from the normal in one system can cause a change in the other.[1]

The Structure of the Unit

The Buddha in explaining units, like the physical scientist, proceeded to analyze their structure. The Buddha's conception of elements, as the ultimate constituents of units of mind and matter is no different to the physicists' view that an atom is made up of elementary particles[2]. Thus, the

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[1] On this view can be explained the teaching of Psycho somatic medicine, otherwise, psychosomatics, that many physical complaints are related to the patient's psychological reactions to life. For example some cases of peptic ulcer, colitis, blood pressure, asthma, and migraine are due to stresses of life. See also section on interactionism in p. 225.

[2] **The Physical Unit or Atom**

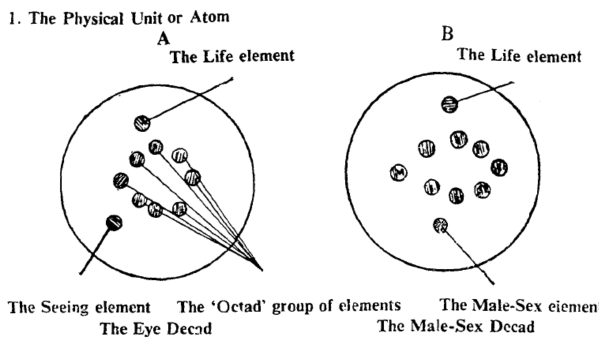


Fig. 12. Diagrams to illustrate the structure of atoms. The physical unit as the rūpa kalapa, which means a bundle of rūpas, is held to be an aggregate of material elements (*rūpa dhātu*). Their numbers, in quality and quantity vary in the different atoms. In quality they may range from 8 to 13. Thus in *Fig*. A the eye decad consists of an inseparably bound radical (*avinibbhoga*) of eight elements called the octad together with the elements of life and seeing. In B the atom called the male-sex decad consists of the octad together with the life and male sex elements. The elements constituting the octad radical are: the four primary elements of support or hardness, cohesion, energy and motion together with color smell,

thought or unit of mind, is made up of the cognitive and non-cognitive elements or the mental factors (*citta* and *cetasikas*). This cognitive element and the mental factors in each moment of consciousness are representative of four groups or masses of mental elements (*nāmakkhandha*). They are called the feeling, the noting, the formations and the cognition groups. This view of mental structure[1] bears some similarity to the widely held view among western psychologists that the mind is made up of a trinity of elements, namely, the cognitive, the affective and the conative. The Buddha's classification grouped the conative or the volition element in the formations group; the cognizing function is considered in western psychology as having the cognitive function as well as the noting or marking functions. According to the Buddha there are fifty-two mental factors[2] and they refer to feeling, noting, attachment, ill-will, and a number of others.

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taste and nutriment (*paṭhavi, āpo, tejo, vāyo, vaṇṇa, gandha, rasa,* and *ojā*). They are dealt with more fully in Ch. VII.

[1] **The Mental or Thought Unit**

This compound state or aggregate is called a thought unit (*sampayutta dhamma*). As with the inseparable mass or the radical elements (*avinibbhoga rūpa*) being common to every kind of matter, so are cognition (*citta*) and seven mental factors or mental universals found in every unit of thought. These seven are: the contact, feeling, noting, volition, concentration, psychic life and the attention elements. Altogether there are mental factors ranging from 7 up to 37, in the 89 different kinds of thoughts. Thus the first moral thought of the sense plane, in an act of speaking the truth, has the cognition element and 34 mental factors, i.e., the 7 universals, 6 particulars, 19 wholesome, right speech and wisdom. The thought unit called the eye cognition has only cognition and the 7 universals. See p. 96 *Fig*. 14 and p. 153.

[2] *Ārammaṇa vijānana lakkhaṇaṃ. cittaṃ*. Cognition is that which has the characteristic of knowing the object. *Cetasi niyuttaṃ cetasikaṃ*—Mental Factors are those natures that are engaged in the thought.

Similarly, the unit of matter is constituted by the physical ultimates or elements of cohesion, hardness, color, etc.

If the Buddha was so great a forerunner of modern psychology, He was equally a forerunner of physical science. For Him also, to be able to understand the nature of mental or physical process, one has to learn the nature of phenomena, at the atomic and subatomic levels, i.e., of the unit and of its constituent elements.

Is there a Substance or Soul?

The question invariably arises as to what binds or holds together these elements. In the domain of psychology this was one of the basic questions the Associationists failed to answer.[1] The French mathematician and philosopher Descartes (1596-1656), argued the existence of an ego by means of a logical trick. "I think, therefore, I am", so went his formula. It has now been shown that Descartes should have said, "Therefore there is thought"[2]. This coincides with the Buddhist teaching that there is thinking but no thinker. The Buddha is quite explicit that there is no substantia1 entity, whether it be mental or corporeal, that serves to thread the various elements together, or by which the elements adhere. That which binds is none other than the interactive forces of the different elements or the relations holding between them.[3] There is absolutely nothing like a dominant soul that can exercise its will on the other elements, to cause or prevent their birth or death or be able to contradict the law of impermanence in all things. Nor is

[1] H. C. Warren—*A History of Association Psychology*. Constable & Co.

[2] Hans Reichenbach. *Rise of Scientific Philosophy* p. 35.

[3] Some of them are the conascent relation (*sahajāta paccayā*), dependence relation (*nissaya paccayā*), mutuality relation (*añña mañña paccayā*), presence relation (*atthi paccayā*), etc. see Ch. X on causal relations.

there anything that can prevent the evil and the fears that arise on account of such change, and thereby contradict the law of infelicity in all things.

Four Standards in Knowledge

Let us now consider what we seek to know in things, otherwise mental and physical events. Such an inquiry regarding an event is in respect of four criteria[1]. They are: its nature or characteristic, its function, its manifestation, otherwise how it appears to the meditator, and its immediate or proximate cause. When elements are examined in respect of all four of them, we can distinguish between elements that may be like in some respects and unlike in other respects. Thus the whole meaning of a conception consists in issues that have a practical bearing.

Of them, one very important criterion is the function. This we have already considered, while discussing the structure of the unit. However, the significant point to note is that elements are reckoned as functions (*kriyā-mattā*)[2]. They lack any persistent nature at any point of time as to be called a thing or substance. They arise to carry out various functions, otherwise exist, and so are reals (*paramatthas*). So that, to say that a unit has a number of elements, means that the unit has within it, different kinds of activity.

The Activity within the Unit

The various kinds of activity or functions, may be carried out in different degrees of intensity. These may be illustrated by analyzing the thought unit in the act of

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[1] Characteristic (*lakkhaṇa*), function (*rasa*), manifestation (*paccupaṭṭhāna*) and proximate cause (*padaṭṭhāna*). These are the standards against which definitions are given and are understood fully in the course of the development of insight wisdom by the insight meditations.

[2] *Kriyā mattā* means merely functions, i.e., absence of an agent. The same is understood by the term *dhamma*.

stealing. First there is the knowledge of the stolen object. This is done by the cognitive element. Then there are the mental factors which denote the active parts of the unit attendant on knowing the stolen object. It is as if the mind grasps the object or directly and immediately apprehends it as a part of itself. Of these mental factors, which are only functions, one is the feeling element which experiences the taste or flavor of the object as being pleasant or unpleasant in varying degrees. Then there is the conative or the volitional element (*cetanā*). This refers to the fact of striving or the working in the object in a masterly way. This is like an engineer that designs, co-ordinates and directs the masons, carpenters, laborers in their respective functions in the erection of a building. The form of the striving in the thought unit may be of such a kind as to cause a bodily act or a verbal act and that in a particular way as to grip the object, to bend or stretch the arm. It is this volitional element which is called *kamma*[1].

Of some twenty-one elements or functions in that thought unit, one out of the four elements of willingness, cognition, effort and judgment, may function to become an over-all dominance (*adhipati dhamma*) in the performance of the act; the others then become recessive or backsliders and so it carries out the theft. (Further details are given elsewhere.)

Now, this distinction between the dominant aspects of the psychic elements seems to distinguish between passivity and activity in knowing as is found in epistemology or the theory of knowledge. It also shows that just as goal-seeking

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[1] "Monks, volition, it is I call *kamma*." For how volitions cause physical and mental acts, see pp. 196–198 on the relation of thoughts to present action and future effects and pp. 170–173 on atoms born of past-action and thoughts. An understanding of this volition element assumes great importance in Buddhism. However it is only the volitions in moral and immoral thoughts that become *kamma*.

behavior is possible to machines[1], so it is equally possible to the mind.

In this way there are a large variety of activities within the thought unit. The mind operates and performs its various functions with those elements, as well as with the unit as a whole, without any over-riding doer or self. That is the meaning of no-self or impersonality (*anattā*).

The Naming of the Unit

Assigning proper names for the sake of brevity or convenience is useless. A name to be meaningful should convey some idea of its nature, realistically and should also enable one thing to be distinguished from another.

Each unit of mind or matter, then, is named according to the dominant function or the structure.[2] But both aspects are never lost sight of. So that, in speaking of a thought with envy, we refer to a thought unit in which the element of envy, predominates over some twenty or so mental

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[1] R.H. Thouless in *General and Social Psychology,* University Tutorial Press, p. 55.

[2] Physical atoms are named according to structure or to function or both. Thus, the atoms on which sight depends is called the eye decad from its composition by ten elements and from its function of enabling the eye cognition or seeing to arise. See p. 64 *Fig*, 12. An atom with life is called the life nonad from its composition by nine elements and its ability to maintain corporeal life.

The mental unit is sometimes called by a functional name such as the investigating thought or the impulsion thought, for investigation and impulsion are functions. Sometimes they are called by a structural name such as the "greedy thought with happiness, false view and is spontaneous," (see p. 79 n. 5) for happiness, and false view are elements constituting the unit.

As taught in western philosophy all the characteristics need not be mentioned in giving a name. We therefore find in Buddhist nomenclature the ideas of defining and accompanying characteristics given a practical turn. See p. 118.

elements, which constitute the unit. This was in fact, the fundamental premise of a school of psychology called Functionalism, started by the American philosopher and psychologist John Dewey. The Functionalists identified and named the thoughts in terms of their functions, unlike the Structuralists, who were concerned mainly with the constituent elements of thoughts. The penetrating understanding of the Buddha, allowed Him to see, that what was needed was both a structuralist and a functionalist view-point, in the analysis of thoughts. This is exactly the position adopted by contemporary psychologists in the criticism of the two movements of Structuralism and Functionalism.[1]

Furthermore, at the same time as giving the units individual names, we also give them class or relational names, such as moral, immoral, resultant and inoperative. That is done in order to be able to handle so many thousands of names of entities, which would result if we had to set out every characteristic of a unit in assigning names.[2]

The Generative Forces of the Units

(a) Of Matter

The elements, such as the four primary elements, are not found by themselves, but only within the unit. They arise and cease at the same time as the unit. Now, why do they come into existence? Any unit of matter arises on account of one or other of four categories of causes or conditions. If we consider this along with its constantly changing nature, we can say that matter is an appearance of a cause. Any worthwhile knowledge of them, therefore, should include

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[1] G. Murphy: *A Historical Introduction to Modern Psychology*, Ch. XIII, Routledge and Kegan Paul, London, 1948.

[2] John Hospers: *An Introduction to Philosophical Analysis*. Ch. 1. pp. 14–64.

their causes also. These are past-action, thought, energy and nutriment.[1]

Of them, past-action or *kamma* are the volitions of the thoughts with which various actions were done in the past.[2] The force of striving or the volitions in these past actions, often in past lives, creates in the present life, certain kinds of matter such as the life element, the sex elements and the sensitive elements of the body. This is due to the maturation of a process which began with the time when the past action was committed. Following the commission of the action, there was left behind an impression or trace.[3] Under specific conditions these traces give rise to effects which are material and mental. They are: the atoms born of past-action, the resultant thoughts and other innate abilities, endowments, and disabilities (*ānisansa* and *ādinava*) that enable such units of mind and matter to arise.[4]

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[1] Past-actions (*kamma*), thoughts (*citta*), energy (*utu*), nutriment (*āhāra*). This subject of genesis of mind and matter will be again dealt with elsewhere. See pp. 169–177 on genesis of matter and Chapter X on the 24 causal relations.

[2] Hospers states that in the minds of many persons lingers the idea that, somehow, volitions (acts of will) have a peculiar and an ultimate place in the sphere of causation. *An Introduction to Philosophical analysis*, p. 382.

[3] This is the asynchronous *kamma* relation (*nānā khanika kamma paccayā*) of volition mentioned in p. 223. This formulation is described as of the nature of yielding a plant on planting a seed. This effect occurs only when other suitable conditions are present. In the establishment of causal relations actual physical presence and contact need not exist.

[4] See atoms born of past-action p. 170; resultant thoughts p. 120; and remote effects of volitions p. 202.

This one-to-many causal relation where volitions caused atoms born of thoughts (see ideo-motor action) by the conascent or synchronous *kamma* relation, and where volitions of a past thought caused atoms born of past-action and resultant thoughts

The second primary cause of matter is thought. These thoughts can generate a number of different kinds of atoms that can cause the health of body, maintain posture, cause respiration and also cause muscular movements. Such matter are called atoms born of thought. Of them, two kinds, in particular, are: the bodily intimating and the verbal intimating atoms.[1] Curiously, Watson, the founder of the Behaviorist School of modern psychology, enunciated a similar connection between thought and movement in his notion that thinking was sub-vocal speech[2]. He, however, failed to see the dominance of mind in this relationship and that thinking precedes the expression. Equally the notion of intimating matter is strongly paralleled by the physiological concept of the nerve impulse[3].

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and innate abilities by the asynchronous *kamma* relation; as well as the idealization as the one-to-one relation in the dependent origination; and the many-to-one relation in the *Paṭṭhāna* (see Ch. X) are similar to the views on causality in science that causes do not determine effects uniquely. See David Bohm in *Causality and Chance in Modern Physics*, Ch. I Section 7, Routledge & Kegan Paul.

1 Most thoughts including the life continuum can generate matter. However those causing voluntary movement are generated in the impulsion stage and are of two kinds: the atoms causing physical movement and those causing speech (*kāya viññatti* and *vaci viññatti*). For their relation to psycho-somatic medicine and to extra sensory perception see the section on atoms born of thoughts pp. 172–174 and the Appendix pp. 310–316.

2 Watson, J. B. *Psychology from the Standpoint of a Behaviorist*. 2nd Edition, J. & B. Lippincott Co. Philadelphia.

3 These Intimating atoms are described as: being not directly caused; as spreading through the body; and very fast, being equal to the speed of thought. From its simultaneous arising with its parental thought, we may presume it has the same place of origin as the element or base (*vatthu*) on which the thought arises, i.e., the nerve cell. Such a view will reconcile the views of physiologists that the nerve cell carries out the functions of

The third category of causes is energy or heat. It is an integral property of every kind of matter. The interaction between external and internal energy is responsible for most of the different kinds and states of matter[1]. While in science the different kinds of energy, such as mechanical, thermal, chemical and electrical, are held to be manifestations of the common property of energy, the Buddhist grouping of matter outside the bodies of living beings, also falls within just one category 'originated by energy' (*utuja rūpa*).

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receiving, transforming, and transmitting messages from the external world, while holding that the body and the mind are two distinct systems. See also Appendix pp. 319–321.

[1] **The Interaction of the Elements**

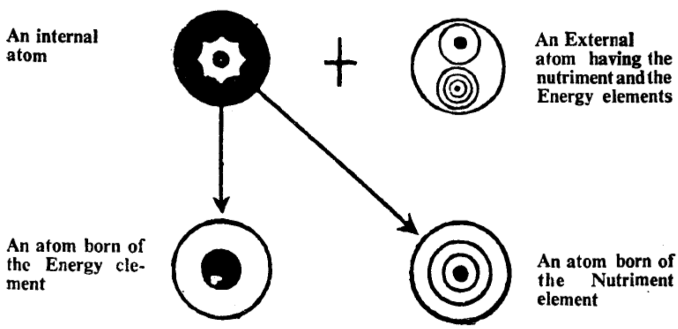


Fig. 13. Diagram to illustrate the constant interaction between elements. The action of the external energy on the internal energy, within the atoms of the body cells, can cause quantitative changes inside the atoms and thereby a qualitative change in the cells. Since both energy and nutriment are elements common to all matter, the *Fig*ures show how such changes can be brought about. It is also said that the presence or absence of any one of the four causes effects the others, thus upholding the view that the body acts as a whole. This is one way in which the chemical conception of life can account for illness as being due to imbalance of the elements.

The fourth cause is nutriment, which is also common to all matter. This is an element within the atom and not the atom itself. In some material things it is abundant and in others it is scanty. Here too, new atoms in a living being may arise from the interactions of external and internal nutriment[1], leading to the growth and vitality of living tissues.

Although in the outside world, such as rocks and rivers, only the causal factor of energy operates to generate new atoms, in the body of a living being all four causes of matter operate.[2]

(b) Of Mind

We now come to the genesis of thoughts. This, the Buddha set out in a treatise called the *Paṭṭhāna*. The coming into being of thoughts, i.e., of one thought arising after the previous one has ceased, is attributed to several of the twenty-four causal relations or conditioning influences[3]. Ignoring minor distinctions these relations can be grouped into four main categories. The first is the object relation, which points to the basic fact that there can be no thought unit without an object. The character and quality of the objects give rise to different thought processes about the

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[1] See pp. 175–177. The nutriment element in the atom is called *oja*.

[2] It remains a fact that science is not able to account satisfactory for the matter which Buddhists state to be due to past-action and to thoughts. See p. 172 n. 1 and p. 173 n. 2. The work of Dr. Rhine and his co-workers on the effects of thoughts on matter shows that the contention of the Buddhists as regards thoughts generating matter is true. Recognition of the other contention, namely, that matter can also be due to past-action, otherwise volitions of a past, will bring ethics into science. So that an account of the working of the body that does not take into consideration these two genetic forces as well, will necessarily be incomplete.

[3] Causal Relations (*Paccayās*). These are more fully dealt with in Ch. X. See p. 225 on interactionism and also p. 221 n. 1 for their names.

object. Secondly, there is the past-action relation whereby certain thoughts arise independently of our striving. Before the mind acts towards an object decisively, certain thought units which are the conscious effects of past actions arise to inquire and investigate, otherwise to become aware of the object. This is like the physiologist's reactivation principle of memory[1]. It is these volitions of the past which are referred to as *kamma*. Thirdly, there is the presence relation. By this influence certain thoughts are said to appear only in the presence of other thoughts similar to the coming into existence of fishes only in the presence of water. To illustrate this from the field of science, one can think of catalytic action. Lastly, the category of the sufficing relation is one of dependence, like a painting existing on account of the canvas.

Summary

Summarizing what we have stated, the mind and the body of a living being exist in the form of units of mind and of matter. These units are formed of ultimates or elements. Neither the elements nor the units are threaded together, by anything called substance or soul. These elements have only a very brief life, i.e., they lack permanence. They are only functions performing different kinds of work. They are named according to structure and function. They are all conditioned, otherwise caused,[2] and when the condition ceases the effect also ceases.

The principal generative causes of matter are past-action, thought, energy and nutriment. Those of mind are the twenty-four relations. They may be condensed into the four

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[1] Hebb, D. O. *Organization of Behavior*, *A Neuropsychological Theory*. Esp. pp. 12–16 and 62–66. John Wiley & Son, N. Y. 1949.

[2] The Pali word for such conditioned events (matter and mind) is *sankhata dhamma* or conditioned elements. *Nibbāna* alone is the *asankhata dhamma* or the unconditioned element.

categories of the object, the past-action, the presence, and the sufficing relations. To be precise, we may reckon them as a certain number out of a list of twenty-four.

In this way Buddhism teaches the principle that everything in the world comes on account of something else. There is no first event or first cause, be it volition or God. That will be elucidated still more clearly as we proceed further.

CHAPTER III

THE UNIVERSE AND ITS LAWS

THE universe consists of an innumerable number of heavenly bodies existing as systems.[1] The worlds of each system can be grouped into three inner systems.[2] There is life in other worlds and these differ in quality and duration from one another. This universe of animate and inanimate objects exists on a basis of conditioning and the occurrence of mental and physical events that are governed strictly by natural laws.

The Natural Laws (*Niyāma Dhammas*)[3].

The Buddha discouraged the vain search after and the theoretical discussion of absolute notions such as the origin and the end of the universe or of the self. Instead, He enunciated, first, a study of life and of phenomena in respect of their laws. This makes Buddhist Philosophy a scientific or positive philosophy. In the last chapter we described the nature of the elements, of the units, and of their tenetic factors. Here we shall take up the study of phenomena as being subject to invariable and inexorable natural laws, rather than as the products of an arbitrary creator. These laws are ultimates and it would be absurd for anyone to ask for explanations of that which explains. These natural laws or niyāma dhammas in Buddhism are of five categories,[4] namely, the laws of past-action, the laws of thought or

[1] See the immensity of the universe pp. 83–85.

[2] A *cakkavāla* is constituted by the *tiloka*. See p. 83.

[3] Natural laws (*niyāma dhammas*) are different from the prescriptive laws that are given by persons in authority, and are called by a different term (*ānatti*)—Buddhism does not have recourse to gods nor to symbols such as bulls or phallus, to represent these natural forces.

[4] They are called *kamma niyāma, citta niyāma, bīja niyāma, utu niyāma,* and *dhamma niyāma*.

conscious process, the laws of heredity, the laws of energy, and the laws of phenomenology. There are also minor laws within these major laws.

First, the law of past-action (*kamma*) states that any action in the past, as thought, word or deed has the potential to yield effects such as certain thoughts, matter, personality and environment, that are often of a nature dissimilar to the cause. Because of such mental and physical events, there arise in him other thoughts to do various things. The modern scientist would agree to this principle, because this only means that whatever is an effect of some cause may itself be a cause of other effects. On account of this, he too has a notion of interlocking cause-effect sequences leading to a causal web or nexus. It is on the basis of this law that we speak of present action determining future effects, whether it be in pleasant places as the heavens or unpleasant places as the hells, or as deliverance from existence. It is primarily by the operation of this law that we have been going round and round in circles in life after life.

Further, the effect is generally proportional to the intensity of the cause and arises and lasts only in the presence of the causal influence. It is never everlasting.[1] Hence, it is wrong to speak of an eternal hell or heaven.

But the Buddha added to this an ethical or valuative feature[2] when effects are regarded as being either agreeable or disagreeable according to whether the causative actions are due to moral or immoral thoughts. Since thoughts are moral or immoral according to the presence of moral or immoral mental factors, we can, by this kind of knowledge of causes and effects, give meaning to morality and enable one to enhance the benefit or value of his other action. We are thus analyzing good and evil into positive terms by

[1] When the cause ceases the effect also ceases both in respect of units and of series of units. See p. 215 n. 2 on the wheel of life.

[2] See definition of morality and immorality on p. 91.

tracing them to mental elements. The determination of what is good and bad is then not left to individual caprice, but to the operation of this moral law. One meaning of the contrast between good and evil, that is *kusala* and *akusala*[1], is that between skillfulness and unskillfulness. It is the difference between intelligent and unintelligent action in being able to distinguish between what one ought to do for real gain, and ought not to do because of harm;[2] or the knowledge of the causative factors, the nature of phenomena and making practical use thereof.[3] This intellectualization of ethics does not disparage emotion. Happiness becomes more and more sublime the higher the ethics, until it attains its highest peak when actions are done with equanimity.

These teachings on moral law[4] enable Buddhism to benefit different types of men. Thus the terrors of the lower worlds, which are the consequences of evil, are suited to the incorrigible, proud and hard hearted people; while the enjoyments of the heavens which are the natural effects of moral acts, are suited to the despairing and healthy minded.[5]

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[1] The word *kusala* for moral, means that which is mental health (*arogya*) which is free from fault (*anavajja*), born of wisdom (*kosalla*), and is productive of pleasant effects (*sukha vipāka*). *kusala* also means skill. The word *akusala* for immorality means that which is opposed to *kusala*. *Akusala* and *kusala* are therefore mutually suppressive or expulsive.

[2] *Kattabbassa ca akaranampi pāpakānaṃ nāma.*

[3] Buddhists as followers of a natural science, i.e., have no injunctions or commandments the violation of which is sin. Hence the Buddha only exhorts people to understand these workings and act wisely. Laws, however, have been given to His order of monks, only in order to bind them and enforce discipline, for their own advancement, and not for exercising power nor for ultimately making converts of people. See Introduction pp. 38–39.

[4] William James writes: “As I apprehend the Buddhist doctrine of *karma*, I agree in principle with that.” *Varieties of Religious Experience*, Mentor p. 328.

[5] See the story of Kesi, the horse trainer, in *Anguttara Nikāya*.

This is not a doctrine of reward and punishment, but a dynamic biological law of growth and development.

Now let us take the second of the natural laws—that is of thought or conscious process. Thoughts and mental processes do not arise haphazardly and without an order.[1] Hence, their occurrence is lawful. Thoughts control speech and physical action and also contribute to mental and physical health.[2] Whatever be the validity of Freud's theories, it was Freud who gave this assumption of an absolute psychic determination to modern psychology.[3] Yet as conditioned elements, it was the idea adumbrated by the Buddha, centuries before the advent of western psychology. The strict determination of thought and thought elements, however, does not deny the possibility of having to choose between competing and conflicting thoughts.[4] Thus a person may still choose to act either in a moral or immoral way. however, then too, he is conditioning his thoughts of action.

The third group of natural laws refers to Heredity and is an attempt to account for the facts of resemblance. This contains the essence of Mendelian Genetics devoid of

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[1] See Chapter IX on thought processes and p. 192 n. 1. Their study shows us the existence of minor laws within the major laws.

[2] Immoral thoughts cause unpleasant, rigid and oppressive physical and mental states; while moral thoughts cause serene, light and efficient states.

[3] Freud's *Introductory Lectures on Psycho-Analysis*, Allen & Unwin Ltd. London, 1949. Heidbreder E. *Seven Psychologies*, Century Co. N. Y. 1933, gives a critical appraisal of Freud's contribution to modern psychology.

[4] If at the moment of determining (see diagram of the thought process in the sense avenue p. 186 *Fig*. 24, the object were grasped wrongly (*ayoniso manasikāra*), then the impulsion thoughts that succeed would be immoral; if it were grasped correctly (*yoniso manasikāra*), then the impulsion thought would be moral. Further, a thought unit is conditioned by a set of causal relations which are not identical at the different times.

scientific detail.[1] Buddhists say that three conditions should be fulfilled for successful gestation. They are: the joining of the parents[2]; the proper time of the mother; and the death of an individual attuned to the new life conditions.

Fourthly, there are the laws of energy. Energy, in its two forms of heat and cold, causes many changes within the body, such as old age and illness as well as changes in the external world, in respect of such things as climates, seasons and rains, with a certain regularity. This category would include the great body of the laws of physics, major and minor.

Lastly, we must briefly examine the laws of phenomenology.[3] These connect under one head, the immense variety of happenings occurring at the birth, during the life, and at the death of Buddhas. Others that can be included among these laws are: the 'asservation of truth' (*sacca kiriyā*)[4] and nature itself.[5]

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[1] That the progeny should resemble parents, in both the animal and the vegetable kingdoms, is thus not the work of a creator but a law of nature (*dhammatā*). Buddhists are thus taking the heredity factor into account.

[2] Other modes of fertilization are mentioned in the *Milinda Pañha.*

[3] All those phenomena not covered by the four previously mentioned natural laws can be included under the term *dhamma*. See pp. 264–265.

[4] A wish for the occurence of an event on account of a truthful statement.

[5] Subjects such as gravity, instincts, tropism may also be included under this head. See p. 265 n. 1, for suitability of word 'norm' for *dhamma*.

THE UNIVERSE

The so-called Mysteries of the Universe

We can now turn to the Buddhist concept of the Universe, particularly with regard to its cosmology and biology. Our concern is also with the vast array of non-empirical facts, often ignored by the field of science such as the existence of spirits, of past lives, of formless beings, the operation of *kamma*, of telepathic communications and so on. In Buddhism there are no mysteries. There are, however, supernormal events such as the various psychic powers; but they are brought under laws.

Furthermore, instruction is given in acquiring such powers to those who may desire to have them. In treating of such phenomena, no doubt we are aware of dogmatic people who scoff at inquiry into what they thought were unverifiable. Yet the fact remains that science[1] has made a beginning to work in this area, notably by the Society for Psychical Research, and at Duke University. However, the main point to be made is that a belief in these psychic phenomena is not essential to a partial understanding of the Four Noble Truths and the practice of the Noble Eight-fold Path. Those who do not agree that there are spirits, or telepathy, and those who leave these as open questions, can yet find agreement as to the truth and the merit of the Four Noble Truths and the Noble Eight-fold Path. But a teaching of this kind involving the above phenomena is necessary for a religion, which endeavours to present a world view of life in nature, known and unknown, that is to say cosmism. Furthermore, this knowledge of mind, and matter and their

[1] Terms such as precognition, psi, psychokinesis, psychosomatics have come to stay. Dr. J. B. Rhine quotes Prof. R. H. Thouless, a former President of the Society for Psychical Research, as saying with regard to extra-sensory phenomena “The reality of the phenomena must be regarded as certain as anything in scientific research can be proved.” *Reach of the Mind*, Pelican p. 146

interaction; and its extension to fields so far unexplored by science also helps to see the evolution of the human personality through higher lives to the perfection of it in the unconditioned element, *nibbāna*.

The Planetary System (*Cakkavāla, Tiloka*)

- 1. The Worlds of the Sense Plane (*Kāma Loka*) 11
  - Lower Worlds or places of Unfortunate Existence (*Dugati, Apāyas*) 4
    - The Purgatories or the Hells (*Nirayas*)
    - The Kingdom of Hungry Spirits (*Petti Visaya*)
    - The Kingdom of Evil Spirits (*Asura Kāya*)
    - The Kingdom of Animals (*Tiracchāna Yoni*)
  - Places of Fortunate Sense Existence (*Kāma Sugati*) 7
    - The World of Humans (Manussa Loka)
    - The World of the 4 Great Kings (*Cātummahārājika Deva Loka*)
    - The World of the 33 Gods (*Tāvatiṃsa Deva Loka*)
    - The World of Yama Gods (*Yāma Deva Loka*)
    - The World of Delight (*Tusita Deva Loka*)
    - The World of Delight in One's Creation (*Nimmānarati Deva Loka*)
    - The World of Delight in Other's Creations (*Paranimmita Vasavatti Deva Loka*)
- 2 The Worlds of the Form Plane (*Rūpa Loka*) 16
  - The 3 Worlds of the First Trance Order (*Paṭhamajjhānika Brahma Loka*)
  - The 3 Worlds of the Second Trance Order (*Dutiyajjhānika Brahma Loka*)
  - The 3 Worlds of the Third Trance Order (*Tatiyajjhānika Brahma Loka*)
  - The 7 Worlds of the Fourth Trance Order (*Catutthajjhānika Brahma Loka*)
- 3. The Worlds of the Formless Plane (*Arūpa Loka*) 4
  - The World of the Concept of Infinity of Space (*Ākāsānañcayatana Arūpa Loka*)
  - The World of the Infinity of Thought as Thought Object (*Viññānañcayatana Arūpa Loka*)
  - The World of the Concept of Nothingness (*Ākincaññāyatana Arūpa Loka*)
  - The World of a thought (that is so subtle) that it can hardly be said to exist (*Nevasaññā Nāsaññāyatana Arūpa Loka*)

The Worlds of Fortunate Sense Existence, the Worlds of the Form and Formless Planes are called the Worlds of Fortunate or Happy Existence (*Sugati*)

In that study of the evolution of the living being, as distinct from that of species, such matters have to be integrated into an intelligible system.

The Immensity of the Universe

The first striking thing we note is not only the immensity of the universe, but also the insignificance, and in some ways, the uniqueness of man in it. The Buddhist view of the universe regards the earth as a part of a planetary system (*cakkavāḷa*, *tiloka*; see previous page). Besides the earth, the system consists of a sun and moon. In addition there are other bodies separated by great distances from one another. All these fall into three systems within that system. First, we have the earth, the four lower worlds and six heavens which are inhabited by animals, spirits, humans and gods (*devas*) and are called the sense plane. Secondly, there are sixteen worlds which are inhabited by celestial beings, having a subtle and luminous kind of matter, and called *brahmas* with form. These worlds are called the form plane. Thirdly, we have four worlds which are inhabited by *brahmas* without form, or living beings having only mind. These worlds are called the formless plane. The name *cakkavāḷa* is given to this composite and which exists round a central axis called Sineru,[1] or Mahameru.

To indicate the long duration and the immense distances of these bodies, the measures year and mile were found to be impractical and so were discarded. The terms for the measures adopted were, aeon (*kappa*) and *yojana* respectively. The great aeon (*mahā kappa*) was divided into[2] the four little or immeasurable aeons (*asankheyya kappas*). Of them one was called the period of destruction (*sanvaṭṭa kappa*); the second was the period of extinction

[1] The word *Meru* means axis. See *Suriya Siddhant* a Chapter on Golas.

[2] Contrast this with the four periods of the menstrual cycle: proliferative, premenstrual or secretory, destructive, and repair.

and darkness (*sanvaṭṭaṭṭhāyi kappa*); the third was the period of formation (*vivaṭṭa kappa*) when the light of the sun and the moon appeared; and the fourth was the period of staticity (*vivaṭṭa kappa*). Thus in Buddhism too, there has been a time when darkness was in the universe. The coming into existence of a world is thus not a creation *ex nihilo*, but a natural occurence more in keeping with the theory of the hot gas ball twenty thousand million years ago.

In respect of distance, opinion is divided as to what makes the *yojana*. It differs from five miles, according to some, to sixteen according to others.

Besides this planetary system in which we live, the Buddha admits the existence of countless other systems,[1] in much the same manner as modern astronomy recognizes millions of stellar bodies, arranged around different axes and forming numerous galactic systems. But unlike the astronomer, the Buddha contends that these stellar systems are inhabited by a variety of living beings. The heavenly bodies are of long duration (measured in aeons) but are ultimately destroyed, mostly by fire and less often by wind and rain.

Man's Position in the Universe

In the planetary system, of which the earth is a part, there are three other bodies,[2] possibly other planets, that are said to be inhabited by men. In the hierarchy of systems, man's position is relatively high, however insignificant he is in the universe in respect of numbers. Birth as a man, is a consequence of great meritorious actions in a past life. He is certainly not the sinner of other religions He is in fact,

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[1] The worlds in relation to the Buddha are of three kinds: *jāti khetta* numbering 10,000 worlds that are effected by his birth: *ānā khetta* numbering a billion worlds where his words carry weight; *visaya khetta*, numbering an infinite number that are known to Him.

[2] They are called *Aparagoyāna*, *Pubba Videha*, *Uttarakuru*. The Earth is called *Jambudipa*.

something like a half-way house on the road to perfection. By virtue of being born as a man he has the unique opportunity of consciously struggling to overcome evil and reaching perfection. Earthly life as a human is so important that all Buddhas elect to be born here for their final struggle and enlightenment.

The Three Kinds of Life or the Three Modes of Being (*Bhava*)

At this point, we may ask whether the nature of the life of a living being, is everywhere the same; and if not, what are the different kinds of life. It is said, that there are three kinds of life corresponding to the three systems of worlds. They are known as the life of sense existence, the life of form existence and the life of formless existence.[1]

As the term implies, the life of sense existence (*kāma bhava*) is that lived in the worlds of the sense plane by gods, humans, animals, spirits, and purgatory beings. There are thus fortunate, as well as unfortunate lives. They all entertain thoughts, having in them lowly base desires and in material things (*kāma tanhā*). This accounts for their being grouped together.[2]

But the life of the form existence (*rūpa bhava*) is attained only by those who have achieved the higher life or the states of ecstasy called the form trances (*rūpa jhāna*) in the previous life. This is a state of mental calm where the mind has paused in activity about the immediate surroundings, and is absorbed in a certain moral concept or idea. Following this trance and the cessation of life there,

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[1] The grossest life is that in the sense plane; the higher life is that of the form plane and of the formless plane attained by way of the trances, and the highest life is that of the saints (*magga brahma cariya*).

[2] According to this view animals are evolving creatures below the human level and possessing cognitive and emotional behavior as men do.

the being is born into one of the sixteen worlds mentioned before, as a *rūpa brahma*. In that life, the body of this being is composed of a subtle kind of matter that emits light. The thoughts of these beings are largely free from defilements, but yet have desires (*rūpa taṇhā*) in the thoughts of the form trance and in the objects of those thoughts such as the concept of the earth *kasina* (an imaginary brown disk).

The third and subtler form of the higher kind of life is that of the formless existence (*arūpa bhava*). This is got as a result of attaining the still higher states of ecstasy called the formless trances (*arūpa jhāna*) in the previous life. These beings (*arūpa brahmas*) have got rid of their material body by the power of trance. They live with and on the mind, which is given to reflecting on abstract ideas. There are desires in them too, (*arūpa taṇhā*) in regard to the thoughts of the formless trance and the objects of those thoughts. These beings inhabit only the four worlds of the formless plane.

The duration of the life of these three kinds of beings also differs. While there is indeterminacy and shortness generally in the lower levels of life, in the higher levels, the duration is long and fixed. As in the case of the concepts of space and in the number of heavenly bodies, so also in respect of life therein, our minds reel at the immensities of time.

These three kinds of life can be transformed at death from one to the other. Thus, a being that has a mode of being as a human in one life, may have a mode as a god (*deva*) in another life or the reverse. Generally, that occurs in accordance with the quality of the life that he lived. That a life is able to undergo such a qualitative change is in the very nature of things. We have the same occurrence in matter, where water can exist in three modes, as solid, liquid or gas.

It is in this way that beings having the three kinds of life in the three systems are different from one another in

respect of their thoughts, their bodies, their habits, the duration of their lives and so on.

The Individual has thus been undergoing evolution and regression or going up and down the scale of life from beginninglessness and will go on until he learns how not to get caught up in this process of conditioning.[1] Regarding species, however, there seems to be little that is found in Buddhism. Nevertheless, in a teaching that is based on conditioning, such as by past-action, thoughts, energy and nutriment there can be no objection to the theory of the evolution of species[2] provided its limitations are recognized.

MIND: THOUGHTS AND THEIR CLASSIFICATION

We now come to the study of thoughts. Since thoughts are so numerous and so varied in character, our first concern should be their classification. That will enable us to see wherein superiority in action lies, and also help in the identification of thoughts, in order to cultivate those that make for progress and to reject those that retard one's moral development. Classification necessarily involves certain characteristics as principles of organization on which it is based.

The Principles of Classification

The main principles of classification are three: plane of existence, ethical nature, and basic motive.

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[1] See Law of Dependent Origination pp. 215–220.

[2] This theory maintained that species arose from variation, natural selection and inheritance; and not as separate creations, when lands became hotter, or colder; food, abundant or scarce; and in the struggle for existence that ensued thoughts and skill in actions had a vital role to play. Here we have all the conditions that are stated above.

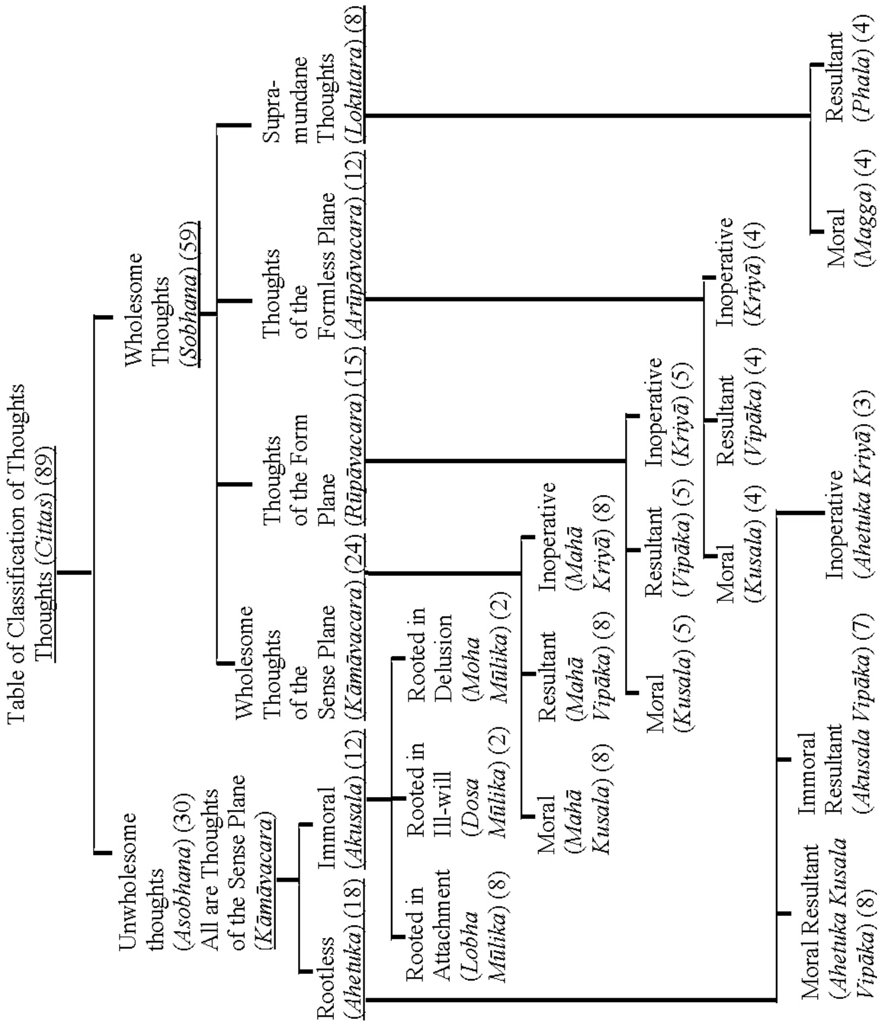


Table of Classification of Thoughts

(The wholesome thoughts of the sense plane are also called the Great Moral, the Great Resultant and the Great Inoperative thoughts.)

(a) The first is by the Plane of Existence, i.e., in respect of the world wherein those thoughts, having some degree of similarity, abound. Thereby we have four divisions: as the thoughts of the sense plane (*kāmāvacara cittas*), of the form plane (*rūpāvacara cittas*) of the formless plane (*arūpavacara cittas*) as commonly pertaining to these planes, and those that have transcended the world, i.e., are supramundane (*lokuttara cittas*).[1] The thoughts of the beings of the form and the formless planes and the supramundane thoughts, differ from the thoughts of sensuous beings, in that they are of the kind called trance[2] (*jhāna*). They perform the functions of trance which are of two kinds: as close scrutiny of object (*ārammaṇa upanijjhāna*) and as close scrutiny in regard to characteristics (*lakkhana upanijjhāna*). To the former belong the thoughts of the form and the formless planes. To the latter belong the supramundane thoughts. This last category refers to those thoughts that tend to release the individual from a life in the three planes of existence, already described. While thoughts of one kind are commonly had by beings of a particular plane, thoughts of the other kinds may also be had by them but less often.

(b) The second principle relates to the ethical nature of thoughts. Thus we divide thoughts as moral, immoral and ineffective.[3] The moral thoughts are those: that procure

[1] The term plane is applied to supramundane thoughts in the sense of state (*asthāna bhūmi*), and not place. The three-fold world of space, living beings and formations, i.e., mind and matter is transcended by them.

[2] See p. 128.

[3] We may otherwise speak of thoughts as being of 4 classes. They are: (i) moral (*kusala*) (ii) immoral (*akusala*), (iii) resultant (*vipāka*) (iv) inoperative (*kriya*).

agreeable effects in time[1]; are mental states of purity; are expulsive of immorality; and are conditioned by the correct grasp of the object; while the immoral thoughts procure disagreeable effects, are impure states, expulsive of morality, and are conditioned by a wrong grasp of the object.[2] On the other hand, ineffective thoughts do not produce any future effects. These thoughts that do not produce future effects, are further classified: as the resultant thoughts, which are conscious effects of past actions; and the inoperative thoughts, that are not conscious effects but are mere action. Each of these is subdivided as those with roots and those without roots.

1. The moral thoughts have in their structure certain mental factors functioning in the manner of roots in trees and some factors that are found in only wholesome thoughts.[3] These thoughts can cause calm states of mind and also cause health of body by the generation of a kind of atom[4] having such attributes as lightness and efficiency.

2. The immoral thoughts likewise have in their structure some other mental factors that also function like roots and some that are found only in the immoral thoughts. These thoughts cause tensions, ill health of body and mind.

Thoughts according to Ethical nature
- 1. Moral Thoughts
- 2. Immoral Thoughts
- 3. Ineffective Thoughts
  - Resultant
    - With Roots
    - Without Roots
  - Inoperative
    - With Roots
    - Without Roots

[1] *Kusala anavajja sukha vipāka lakkhaṇā*. Morality has the nature of bringing out agreeable effects that are without fault. See immediate and remote effects of volitions p. 202.

[2] These are the four standards in knowledge in respect of morality. See p. 67 n. 1.

[3] For the division of thoughts as the wholesome and the unwholesome thoughts, see Table of Classification, p. 89. For the division of the mental factors, see Ch. VI.

[4] See Alterable elements, pp. 166, 173.

3. Now, what are the resultant thoughts? It is with moral and immoral thoughts that various actions were done in the past, As a result they yield effects that are either material or mental. Their material effects are wealth or poverty, power or weakness, being possessed of relatives or not, and certain atoms born of such action. The mental or conscious effects of past actions are known as the resultant thoughts.[1] These resultant thoughts, unlike the moral and the immoral thoughts, perform functions over which we have no control; such as: the occurrence of the sensations that we experience on meeting with sense objects; and in the investigation of objects; in cognizing; the receiving of objects; in causing rebirth; and so on.[2] Some of them have roots others do not.

4 The inoperative thoughts[3] are not conscious effects and do not lead to further effects. Therefore, they are performers of mere action; hence the term *kriyā*.

As the thoughts with roots and without roots they are:

(1) The thoughts of *arahants* when they engage in beneficent actions. Such thoughts can be neither moral nor immoral, for ignorance is completely destroyed in the Arahant.

(2) Three thoughts which function to cause object awareness and the innocent smile of *arahants*.[4]

Let us identify these thoughts by reference to a thought process described in Ch. IX.[5] The life continuum thoughts are resultant thoughts that in some beings are accompanied

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[1] See Resultant thoughts, pp. 126–128, 202.

[2] See functions, pp. 100–105.

[3] See inoperative thoughts, p. 125, and 125 n. l, n. 2.

[4] The smile of the *arahant* is an act of impulsion occurring in the impulsion stage of a thought process. It is neither moral nor immoral.

[5] See p. 186 *Fig*. 24 (a).

by roots and in others are without roots. The 'apprehending-at-the-five-senses' is an inoperative thought without roots. The cognition, the recipient, the investigating are resultant thoughts that are rootless. The determining thought is an inoperative thought without roots. The impulsion thoughts are the moral and the immoral thoughts of worldlings and the inoperative with roots in *arahants*. The registering thoughts are resultant thoughts.

(c) The third principle is in respect of the underlying sources of motivation. The basic motives or root causes or the real reasons for actions are known as roots.[1] There are only six of them:[2] attachment (*lobha*), ill-will (*dosa*), delusion (*moha*) to the immoral thoughts and non-attachment (*alobha*), non-ill-will (*adosa*) and non-delusion (*amoha*) to the wholesome thought.[3] Since these are six mental factors or elements, thoughts with roots are those units of thought in which there are these mental elements that function in the manner of roots to trees so as to give them stability. The thoughts without roots, on the other hand, have no such root-like elements, and so lack stability.

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[1] Motives have been studied in western psychology as the base motives of social approval, of subsistence, of mastery, of sexuality, and as the higher motives of altruistic or selfless action, but when analyzed still further will, fall into the above six. A description of them will be found under thoughts of the sense plane, pp. 120–124 and basic motive, pp. 99–100.

[2] These thoughts are accordingly called: thoughts rooted in attachment, thoughts rooted in ill-will, thoughts rooted in delusion, thoughts with three roots (*tihetuka*, i.e., of non-attachemnt, non-ill-will, and non-delusion), and thoughts with two roots (*dvihetuka,* i.e., non-attachment and non-ill-will).

[3] The term 'wholesome' is used for those thoughts that have in them any of the 25 wholesome mental factors (see pp. 147–152). It includes the moral, the resultant and the inoperative thoughts that have roots. See also the Table of Classification, p. 89.

We have now effected the divisions of the confused host of thoughts—first, by plane of existence into four classes: as being of the sense plane, of the form plane, of the formless plane and supramundane. Then, we divided them as moral, immoral, resultant and inoperative and thirdly, as those with roots and without roots. We then incorporated all these into a single composite classification. Within this broad classification, there are further sub-classifications, based on other differentiating criteria. For that purpose we consider in the next two chapters the presence or absence of certain mental elements such as wisdom, false view and doubt and also the nature of feeling, such as happiness or indifference that is found in every thought. In this way in naming a thought as the inoperative thought of the sense plane that is accompanied by happiness, is combined with wisdom and is spontaneous; or as the immoral thought, rooted in attachment accompanied by happiness, is combined with the false view, and is induced; or as the eye cognition that is a rootless moral resultant we have taken many of these factors into consideration. Ultimately, thoughts are classified into eighty-nine classes or by a slightly different classification into one hundred and twenty-one classes.[1]

[1]A supramundane thought is really a trance thought. Hence each supramundane thought can be taken as five for the reason that there are five trance orders. The eight supramundane thoughts then become forty. These with the 81 mundane thoughts make a total of 121.

CHAPTER IV.

SOME PARTS OF THE BODY-MIND MECHANISM

IN the last chapter we began considering the classification of thoughts; but its further division for the sub-classification requires an understanding of the concepts of feeling, of basic motive, of function, of receptor and effector, i.e., of the response mechanism, of object, and of 'base.' Further, unless we learned of the nature of them too, we cannot hope to understand the autonomic working in man, in other words of a being as inter-dependent and inter-acting mental and physical processes. This is the teaching on which is based the no-soul or the *anattā* doctrine. Such study is one way to break down the illusion of a self from which every worldling suffers. To these we now turn for a while.

1. Feelings (*Vedanā*)

Kinds of Feeling:

First, let us take the phenomenon of feeling, which plays such a dominant role in our lives. This refers to a mental element that is found in every thought unit. Its function is to experience the flavor of the object that is being apprehended by the mind, i.e., of the thought object of the mental unit. Classification of feeling depends on the manner of experiencing it.[1] So feeling may be agreeable, disagreeable or affectively neutral, that is neither agreeable nor disagreeable. Or else, feeling may be of five kinds: three being in association with the mind as in the experience of happiness, unhappiness, and indifference, and two being in association with the body as the experience of pain and

[1] The essence is one, but the forms may be many. The three-fold division is according to the *anubhavana lakkhaṇa* and the five-fold division is according to the *indriya lakkhaṇa*. There are also other ways in which feeling can be divided.

comfort. In this way, we can talk of thoughts as being accompanied by happiness or pain.[1]

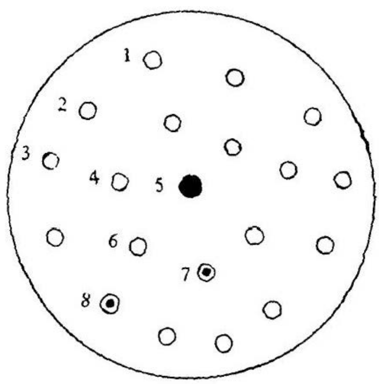
Though feelings may exist in many compound forms, such as terror, alarm, disgust, rage, tenderness, love, elation, joyfulness, the fundamental element in feelings has these five forms. Such feelings can exist along with other mental factors, such as confidence, pride, ill-will, attachment, within a thought unit.[2] These latter should therefore, not be taken as forms of feelings.

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[1] Pain and pleasure are thus parts of the thought unit and do not exist by themselves. This explains the hedonistic paradox that whenever pleasure itself is sought it is not to be found. The way to attain pleasure or avoid pain is not to aim for it but to refrain from doing those actions that cause such painful feelings.

[2] *Fig.* 14. Diagram to illustrate the structure of a thought unit.

1 Feeling (in form of Happiness).
2 False View.
3, 4, 6 Other Mental Factors that form the accompanying characteristics.
5 Cognition Element.
7 Attachment Factor as a Root or Basic motive.
8 Delusion Factor as a Root or Basic motive.



In order to make the Buddhist conception of a thought unit clear we shall have recourse to a diagram. Let us take, as an example the first of the eight immoral thoughts that are rooted in attachment. It is named the thought with happiness, combined with the false view and is spontaneous. As with any other thought unit there are in it a cognitive element and several mental factors. These in the thought selected are nineteen and are made up of the thirteen neutral elements (seven universals and six particulars—see p. 139 n. l and p. 144 n. 2), four elements that are common to

The usefulness of thus dissociating feelings from feelings and other mental states will be found in erroneous sentiments, dispositions and complexes which lead to emotions[1] and impulses.

For the understanding of the supreme happiness of *nibbāna* and of the subject of aesthetics, we shall state two other divisions of happiness that are useful. One is the division of happiness, as that associated with sensations (*āmisa sukha*) and as that dissociated from sensations (*nirāmisa sukha*). In the former, the sensations are those of sight, hearing, smelling, tasting, and touching, as when offering flowers, food, and incense, or when stroking or scratching the skin. The super or non-sensuous happiness is that experienced in the trances, in the performance of moral action, and in the enjoyment of the beautiful.

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all immoral thoughts, namely, shamelessness of evil, non-dread of evil, restlessness, and delusion; and two elements that are specific to this thought, namely, attachment and false view. Of these mental factors, feeling here is in the form of happiness. Two elements, attachment and delusion function in the form of roots in addition to their specific functions. Further, the unit as a whole is of a spontaneously risen or impulsive nature.

[1] The term emotion which stands for feeling together with a certain impulse to behavior or bodily reaction finds no equivalent in Buddhist terminology. It is satisfactorily explained as constituted by two parts: the state of feeling together with atoms born of thought. See p. 172 n. 2.

Buddhism thus gives an explanation which is not entirely in accord with the James-Lange theory of the emotions. This stated that the cause of the emotions was a set of sensations from visceral and vasomotor changes. It said, for example, that we do not cry because we are sorry, but we feel sorry because we cry. Buddhism first traces the feelings and the sensations to their sources, which are sometimes in the viscera; and sometimes are in other thoughts and situations: and these evoke the emotion. Thereby the common sense view is restored to its rightful place.

The other division of feeling is as the happiness of an experiencing (*vedayita sukha*) and as the happiness in an allaying and non-experiencing (*avedayita sukha*, *vūpasama sukha*). The latter is the happiness in *nibbāna*. The super-sensuous happiness may be of the class of experiencing or non-experiencing. The happiness of *nibbāna* is therefore, non-experiencing and non-sensuous (*nirāmisa*), of an allaying of burnings and of oppression (*vūpasama*) by the mundane elements by another kind of element.

Feelings are Conditioned and are Conditioning

These feelings and thoughts are dependent on several conditions for their arising and do not always remain the same. These conditions are: the inherent nature (*sabhāva*) of agreeability or disagreeability of the object; our mental attitude to the object by reason of training, of our views and our associations (*parikappita*); our innate mental disposition by reason of the nature of our rebirth thought being with happiness, or with indifference; and by our personality in being of a thoughtful (*gambhīrasabhāva*) or unreflective and superficial type (*agambhīrasabhāva*).

If we examine a thought process in the sense avenue, we see that in some thoughts, particularly those in the fore-part, we have no control over the feelings in them; but in the latter part, as in the impulsion stage, we can change them if we wish to.

Feelings are not only conditioned but are also conditioning.[1] Hence, on the strength of our feelings, we engage in various thoughts and actions powerfully or feebly. Thus we use terms like *somanassindriya* and

[1] The Buddhist teaching of thoughts and atoms being generated by thoughts as in the concept of ideo-motor action, can provide an explanation for the fact that emotions can produce a variety of physical effects—because feeling is a constituent of a thought unit and can exercise a dominant role (*sukhindriya*, *somanassindriya*) in that production.

dukkhindriya to denote states in which feelings and emotions exercise the dominance relation (*indriya paccaya*).

2. Roots, or Basic motives (*Mūla*, *Hetu*)

We have said that all thoughts are either those accompanied by roots or those without roots. The concept of basic motive[1] is really an interpretation of the notion of "root" (*mūla*.) The metaphorical term 'root' is used because it applies to certain mental elements of some thought units, exercising a function as if the mind was being fixed in the object and drawing nourishment therefrom, in the manner of roots. Thereby they cause stability in thoughts. These roots are the basic motives or the real reasons in moral and immoral action. This is to say, the Buddha, like the psychologists, discerns the meaning of an act in its roots or real motives. Incidentally, in current psychological theory, McDougall's treatment of motives as instincts, exemplifies a similar view.[2] Yet an important point was that the Buddha identified and described motives, in terms of the goal or end-result[3] towards which the activity was directed. In other words, was the action prompted by personal gain and victory or the good of others?

This can help us considerably, for acts, although sometimes masked, can be differentiated into immoral and moral, by the presence of the motives of greed, ill-will and

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[1] We should therefore, distinguish between these basic motives as against states like pride, envy, jealousy etc., which are accompanying elements which may exercise great power, but do not act as roots.

[2] McDougall, W. *An Outline of Psychology*, 10th Ed. esp. Ch. V. Methuen & Co., London, 1948.

[3] Not only does the rightness or wrongness of an action (*kusala* or *akusala*) depend upon the motive but the consequences to the person also depend on that. Hence, we see here the identification of the motivist theory with the consequence theory.

delusion in one kind, and of non-greed, non-ill-will and non-delusion in the other. We may also see that states as conceit and false views arise only from the motive of greed and so are immoral. Consequently, we know to what class a thought belongs and can then deal with an immoral state by dealing with its root. The Buddhist ethic emphasizes just three basic motives in the development of morals and three in the suppression of evil.[1] That reduction is, therefore, of great practical value.

However, it would be incorrect to assume that the identification of motive or root cause exhausts the causal analysis of moral and immoral thoughts. Another important causal condition, out of several others (see Causal Relations, Chapter X), in distinguishing between moral and immoral states is the correct or incorrect understanding of the nature of the object (*yoniso* and *ayoniso manasikāra*). For, when the understanding of the object is erroneous, then immoral thoughts arise, and when the object is rightly understood moral thoughts arise. In other words, the knowledge of the thought object is vital to the complete analysis of moral or immoral action.

3. Functions (*Kriyā*)

Here we turn to take up the study of the functions of thoughts more explicitly than has been done in the previous chapters. According to the Buddha, there are fourteen such functions of the mind, i.e., of thoughts.[2] This function or

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[1] For the nature of the six roots, otherwise the six mental factors, see Ch. VI.

[2] They are: the five kinds of sensations, i.e., the seeing, the hearing, the smelling, the tasting and the touching functions; the apprehending, the receiving, the investigating, the determining, the impulsion, the registering the life continuum, the re-linking or rebirth, and the death functions. While the above are the functions of individual units, the occurrence of events involving memory, discrimination and judgment require a number of thoughts constituting processes. See p. 192 n. 1 and p. 194.

kind of activity we now refer to is that of the thought unit and not of its constituents.[1] But to understand them, it is necessary to have some preliminary knowledge of the working of the mind.

It was said that the mind is never inactive, even in sleep or in unconsciousness. It flows on like a stream and is characterized by states of unconscious or subliminal activity, alternating with states of conscious activity.[2] While the states of subliminal activity are called the 'life continuum stream', those of conscious activity are called the 'thought process'. In passing, it is worthwhile to point out that William James, whose conception of the mind as a 'stream of consciousness' was similar to that of the Buddha, made an analogous contrast between what he called substantive and transitive states, Like James' substantive states, the Buddha's life continuum manifests in the interim period between two thought processes, in deep sleep, and in states of anesthesia. Mental units of the life continuum stream perform the life continuum function or the continuity of the living being. On the other hand, James' transitive states and the Buddha's thought processes, which may be those of the sense avenues or those of the mind avenue, are concerned with perception. The thought objects of these two

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[1] There are also the activities of the elements constituting the unit, i.e., of feeling, contacting, attention, noting, attracting, etc. See Ch. VI. The functions of processes are dealt with in pp. 192–195.

[2] The alternate existence of life continuum and thought process shown in p. 186 n. 1, and p. 189 n. 1, and compared by William James to the flight and perchings of a bird may be diagrammatically represented thus:

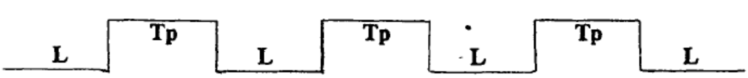


Fig. 15. Diagram to illustrate the alternation between thought process (Tp), and life continuum (L) otherwise mental activity and rest.

processes are also different: that of the life continuum thoughts being one of the death signs and invariable. (See Ch IX); and that of the thought process being that which is presenting itself.

The workings of a thought process in association with the senses[1] may be explained by recourse to the analogy of the mango tree. A person sleeps at the foot of a mango tree with his head covered; a wind stirs the branches and a mango falls near the sleeper. He is disturbed, and on opening his eyes he sees a fruit. He grasps it and presses it, he smells it, and concludes that it is ripe. He then eats it, gulps the last morsels, replaces his head-gear and goes to sleep again.

In this analogy, the sleep is the life continuum stream which is disturbed by the object, i.e., the stimulus acting on

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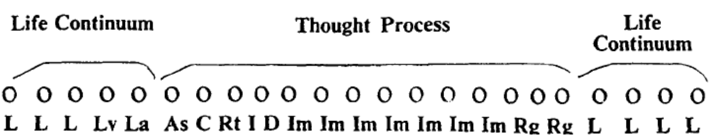


Fig. 16. Diagram to illustrate a Thought Process in the Sense Avenues.

L is life continuum (*bhavaṅga*) thought.
Lv " life continuum vibration (*bhavaṅga calana*) thought.
La " life continuum arrest (*bhavaṅgupaccheda*) thought.
As " apprehending-at-the-five-senses (*pañcadvārāvajjana*) thought.
C " cognition, eye, ear, etc. (*cakkhu viññāṇa*, *sota viññāṇa*, *ghāṇa viññāṇa*)
Rt " recipient (*sampaṭicchana*) thought.
I " investigating (*sanitīrana*) thought.
D " determining (*voṭṭhapana*) thought.
Im " impulsion (*javana*) thought.
Rg " registering (*tadālambana*) thought.

(See p.186 *Fig*s. 22 (a) and (b) for variations with objects of different intensities).

the appropriate subjective sensitive element, just as the branches were moved by the wind. Secondly, the dropping of the fruit is like the arresting of the stream of life continuum thoughts. Following the impact of the fruit, the awareness of something presenting itself, is regarded as the apprehending-at-the-five-senses. Next the object is passively seen, i.e., without an understanding of its nature by the eye cognition. Then there are the receiving, the investigating functions represented by grasping, pressing, and smelling the fruit, which are the recipient and the investigating thoughts respectively. The coming to a decision about the fruit, as being fit to be eaten, is what is done denoted as by the determining thought. Thereafter, there are seven impulsion thoughts which lead to the eating or impulsion, the goal of activity. Finally, there are two registering thoughts as in eating the last morsels or tasting deeply the fruit. Although this is called registering we cannot precisely say what this function is. With this, the person goes to sleep again, denoting that the thought process we have analyzed so far, lapses into the life continuum state once more, as the object has now ceased.

Likewise, similar processes occur in connection with objects that stimulate the ear or any other sense organ. In them, the ear, the nose, the tongue, and the body cognition, arises appropriately, in the place of the eye cognition, carrying out the functions of hearing, smelling, tasting and touching.

At the moment of deciding, there appears to be a choice or free will.[1] If the object is determined wrongly on false data as being permanent, of the nature of a self, with attachment or ill-will, then the impulsion thoughts will be immoral. If the object is determined correctly as being

[1] Every thought unit is the result of a set of causal relations and not of one only. The set operating at one moment may vary at another. In this way the problem of free will and determinism is solved in favor of the scientists.

impermanent, without self, with notions of renunciation, love and kindness, then the thoughts that follow will be moral. In other words, morality or immorality can be the outcome of a conflict between what we wish to do and what we ought to do, or merely the result of habits founded on ignorance or wisdom. This is not to mean that mental processes are working in opposition.[1]

When, however, an object is taken in by the mind proper, i.e., where the object that has entered the mind avenue indirectly by way of the five senses, or has entered directly as in fantasy or reviewing, a different kind of thought process[2] comes into being. Again, the first thought in this process too is an awareness; but it is the apprehending-at-the-mind.

At the moment of rebirth, during life, in the intervals between thought processes, and at death, there arise the thoughts freed from avenues, known as the rebirth, life continuum and death thoughts.[3] It is these thoughts that

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[1] Adler also taught that consciousness and unconsciousness move together in the same direction—Lewis Way in *Alfred Adler*. Pelican, p. 192.

[2]

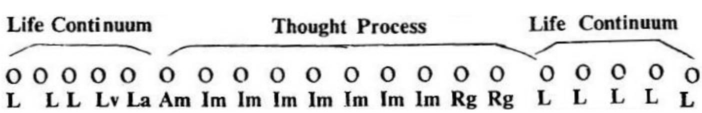


Fig. 17. Diagram to illustrate a Thought Process in the Mind Avenue.

Am is apprehending-at-the-mind (*manodvārāvajjana*) thought. The remaining letters stand for the same names in *Fig.*16. See p. 186 n.1, p. 189 n. 1; for variations of object and order p. 192 n. 1.

[3] The life period consists of the alternating periods of life continuum and thought process as shown in the earlier diagram (p. 101 *Fig.* 15).

function to cause rebirth; continuity of life, in between periods of mental activity; and death itself.[1]

It is in the manner of this analysis that we have the fourteen different functions pertaining to thought units, each of which is, however, only of momentary duration.

4. Response Mechanism (*Dvāra*)

In talking of the thought process, we referred to an initial state of apprehension at the senses. The analysis of apprehension leads us to consider what is meant by 'path-ways' (*dvāra*). Literally, it means the mechanism or way by which an object or stimulus enters into the stream of consciousness and sets up a series of thoughts. It also means, how that thought process leads into action by way of the intimating elements, the equivalent of the nerve impulse. That is to say, the notion of 'path-ways' subsumes the psychologist's notion of a receptor, nerve-path and effector.[2]

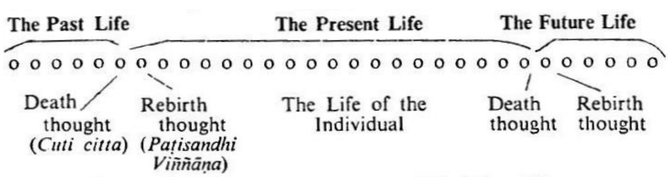


Fig. 18. Diagram illustrating the Periods of Rebirth, Life and Death.

The rebirth thought is the very first thought in the new life, and the death thought is the last thought of that life. Therefore, we can divide the life of an individual into the rebirth period, the period of life or subsistence and the death period. For the nineteen thoughts that can perform this function, see p. 208 n. 2.

[1] As to which of the nineteen thoughts performs the functions stated above, see p.208, p. 208 n. 2 and Ch. V.

[2] Boring, E. G, et al (e.d.) *Foundations of Psychology* Ch. 2, John Wiley & Son, N.Y. 1945, and Morgan C. T., *Physiological Psychology*. McGraw Hill, N. Y. 1943, for a more extended

(a) The Receptors as the way by which the object enters the mind

In physiology, there are the sensory endings which have a capacity for stimulation by objects. In exactly the same way, in Buddhism it is taught that an object, impinging on a receptor element (*pasāda rūpa*) of the five sense organs, gains entrance to the mind, and so sets up a thought process, as explained by the analogy of the drum.[1] Besides these five kinds of physical receptors or the sense organs (*pañca dvāra*), the Buddha includes the mind as a non-material receptor (*mano dvāra*). This, literally mind-door, is really the life continuum thought.[2] All thought objects, including the mental object, arise in the mind avenue by way of this. The description of the physical receptors will be given when dealing with 'base.'

Yet it is not true that all thought objects that come into mind via one of these six different kinds of receptors, have only six response mechanisms. The exceptions are the objects of the thoughts that are 'avenue-freed', that occur at rebirth, at life continuum or the period between two thought processes, and at death.[3] This object is called the death sign, and is described in Chapter IX.

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discussion. See also Appendix B for another comparative study in the response mechanism, and the Chapter on the Synthesis of Matter for the nature of the change in the effector.

1 See Appendix A. p. 289.

2 This is the life continuum (arrest) thought immediately preceding the "apprehending-at-the-mind" thought in the thought process in the mind avenue. See p. 189 *Fig.* 25. The sense object which has been processed in the sense avenue is next taken up by the thought processes of mind avenue by way of this. See p. 192 n. 1.

3 The occurrence of the death thought of the present life, the rebirth thought or the life continuum thought that occurs between any two thought processes is by a mechanism different to that in the avenues of the sense (*pañcadvāra vīthi*) and of the mind (*manodvāra vīthi*). It is called the avenue-freed (*dvāra vimutta*)

In this way, there are three ways by which the object (a physical or mental event or concept) can be grasped by thoughts (a mental event): through the five senses, through the mind, and through the special mechanism called the avenue-freed process. It can then set up three kinds of thought processes called: process in the sense avenue, process in the mind avenue, and process freed from avenues, all of which are described in Chapter IX. Thereafter, they may set up physical reactions of a voluntary or involuntary nature.

(b) The Connector as the pathway to action

An effector is the part of the neurophysiological organism, which carries out a response or action. The connecting mechanism between the receptor and the effector is the connector.[1] To denote this nerve-path or connector, the Buddha also used the term *dvāra*, meaning door or pathway to action. These were called the pathways of bodily action (*kāya dvāra*) and the pathways of verbal action or speech (*vacī dvāra*). They were taken to be the bodily intimating elements (*kāya viññatti rūpa*) and the verbal intimating elements (*vacī viññatti rūpa*). The similarity in science and in Buddhism, in the concept of *dvāra* as the way of entry into avenues of thought, i.e., the occurrence of thought processes, and as pathways to action, is fascinating. But the full significance of the term rests only when taken in conjunction with the receptors or sensitive elements, and the parts of the body they act upon, in much the same manner as the psychologist's notion of the receptor-effector connection. Just as the nerve impulses travelling along the nerve tracts, causes glandular secretion, and movement of muscles, and becomes the link in this

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Process. Initially the object of these thoughts, i.e, the Death sign entered through one of the six senses in the terminal thought process of the previous life. See pp. 206–207.

[1] These are further described in the Appendix B.

response mechanism; so the Buddhist teaching is also, that thoughts can generate a special kind of atom, called the intimating atoms that are very fast, and spread to the particular part of the body or organ of voice, to cause voluntary movement and bodily posture (*iriyāpatha*). Thus thoughts have a vital part to perform in this mechanism of the living being, and cannot be given a secondary role, nor ignored as the Behaviourists did.[1]

5. Objects, Stimuli (*Ārammaṇa*)

Although we have repeatedly mentioned that the mind acts in respect of object, we have as yet to examine the concept of object. An object is that to which a thought unit, made up of psychic elements, clings to and functions in, or that which the thought is 'of' or 'about.' Indeed, there can be no thought apart from object and external to it, nor are there imageless thoughts. The implication is that the objective world is no less real than the subjective or inner world.[2] Hence, we may consider thoughts as intimately bound to ideas of or to the realities in the objects.

The kinds of objects are six: namely, the five sense objects and the mental object.

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[1] The Buddha analyses a seemingly single act or response into three parts. First, there is the thought which may be one of twelve immoral or the eight moral thoughts. Secondly, there is a simultaneous determination as to the form of the action such as one of ten moral acts or the ten immoral acts. Thirdly, there is the determination of the avenue or pathway (body, speech and thought) by which it may be expressed.

[2] By 'real' we do not mean permanence but of existence, i.e., carrying out of a function. In an absolute sense everything, i.e., subject and object changes from moment to moment and our sensations and ideas too change with changes in the object and the receptors. Thus the Buddhist view is in accord with science and common sense. This view is therefore Realism.

These five sense objects[1] refer to only the reals in objects such as color and sound, but not of size nor quality. Thus, for instance, the thought unit, called the eye cognition, knows only color; and the ear cognition only sound. Only these 'reals' in the object can also become the object of the remaining thoughts in the process in association with the sense avenue. Generally, it can be said that to all the thoughts of a specific thought process, the object is the same. Other attributes of objects, such as shape and tonal quality, are known with the aid of the other processes in association with the mind avenue[2] that follow upon the initial one in the sense avenue.

That is to say, thoughts called the sensations, which are definitely not physical events, can grasp only the sense objects or sense data such as color. In fact, one school of modern psychology, subscribes to just this view. They contend that the objects of mind are only primary qualities like color and sound, whereas the secondary qualities have to be learnt otherwise constructed by the mind.

Also what are the mental objects?[3] The Buddhist view is that they are: 1. the five sensitive elements of the sense

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[1] **The Five Sense Objects are**:

1. The visual object (*rupārammaṇa*) constituted by the color element.
2. The audible object (*saddārammaṇa*) by the sound element
3. The odorferous object (*gandhārammaṇa*) by the odour element.
4. The sapid object (*rasārammaṇa*) by the taste element.
5. The tactile object (*phoṭṭhabbārammaṇa*) by a triad of elements the hardness element, the heat element, and the motion element.

[2] See Order of Thought Processes, p. 192 n. 1.

[3] The term mental object (*dhammārammaṇa*) should not be confused with the object of the thought processes of the mind avenue.

organs; 2. the sixteen kinds of subtle matter,[1] in that they do not have the impacting nature between subject and object; 3. the cognitive; and 4. non-cognitive elements; 5. *nibbāna*; and 6. concepts or ideas. They cannot be cognized by the senses. That is to say, that while the mental object is grasped only in the mind avenue, thoughts arising in the mind avenue can grasp objects which are purely mental as well as sense objects. Incidentally, this is how extra-sensory perception is logical and valid in the Buddhist view of the mind. The possibility of arousing thoughts having such capacities, in special thought processes called the trances, shows how we can be freed from errors, such as the illusions by the exercise of the trained, tranquilized and purified mind.[2] In this way, the mind can be conditioned as to be able to grasp certain objects like *nibbāna*. In other words, it is possible to arouse thoughts, such as the path and the fruition thoughts that can do so. It also shows how we may know phenomena, of which we have no possible means of discovery through the senses. The failure to make a distinction between thought and thought object, and between ideas and reals in objects of thought, has led to confusion in the theories of realism and idealism in western philosophy.

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[1] All the physical elements except the five sensitive elements and the seven stimulating elements make up the subtle physical elements. These can be seen only in the mind avenue, where thoughts such as the sense cognitions do not arise.

[2] Yogic knowledge, in which there is purification of thought, is approximating to but yet different from the knowledge in the path, in which there is in addition purity of views. The latter is absolute and is called realization (*paṭivedha ñāṇa*). See also pp. 262–265 on insight wisdom as the establishment of mindfulness (*satipaṭṭhāna*).

Thought process in respect of the temporal relations of objects

Sense objects can be divided as being of the present,[1] i.e., in its existence of seventeen thought moments, as of the past when it no longer exists, and as of the future. The thoughts of the process in the sense avenue can only arise in respect of the young, or the fast decaying, but existing sense object, i.e., of the object in the present, and never in respect of that which has ceased.[2]

Mental objects, however, may be of the present, past or future or have no relation to time. To the latter, belongs concepts and *nibbāna*. Hence, thoughts of the mind avenue, can have either a sense object having any of the temporal relations, or a mental object, having such temporal relations or not. This view enables the phenomenon of precognition or foretelling to also be satisfactorily explained.

The agreeability of objects is an inherent quality

The object is reckoned as being disagreeable (*aniṭṭha*), or agreeable (*iṭṭha majjhatta*), or very agreeable (*ati iṭṭha*) to a particular sense. But it may be thought of differently as a result of distortions (*vipallāsas*), which are subjective phenomena. So the appreciation of objects is not entirely a subjective quality.

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[1] There are three ways in regarding the present. One has therefore to be careful in which sense the term is used. These three are: 1. the life duration of a material unit (*rūpa dhamma*). This is the equivalent of seventeen thought moments and is called the *khaṇa paccuppanna*; 2. the period of the first four thought processes in perceiving the object (*santati paccuppanna*); 3. the period of the life of a living being, from conception to death (*addhā paccuppanna*).

[2] The thought process sinks in life continuum because the object has ceased and the mind must act towards a new object.

6. Bases (*Vatthu*)

The concept of 'base' refers to the material elements on which thoughts dependently arise. Otherwise, these are the abodes of thoughts. These 'bases' or organs of knowledge are of six kinds. Five of them are for the genesis of the five kinds of sense cognitions and the mind-base[1] is for the genesis of the remaining thoughts.

The physical elements on which the sensations arise

Now, from our previous discussion, it is clear that the first five 'bases' must refer to the five kinds of receptors, or the five sensitive elements on which the five sense stimuli impinge or are received.

The sites of the five sense bases, as described in the canonical texts, are more in keeping with the physiological location, than is the commentarial interpretation, usually given.

The sensitive elements of seeing, or the eye base, is described as set in the eye in the midst of seven membranes, with the eye cognition existing like a serpent inside a hole, delighting in color contrasts. The physiological teaching is that they are the rods and cones in the ten (or seven) layers of the retina.

The sensitive element of hearing, or the ear base, is described as existing in the form of a ring set with fine hairs, deep inside the ear canal, with the ear cognition

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[1] The mind door (*manodvāra*), or the access to the mind avenue is a non-material receptor. This is the life continuum (arrest) thought immediately preceding the 'apprehending-at-the-mind' thought. However, that life continuum thought arises dependent on the mind-base element (*hadaya rūpa*) which is matter. One has therefore, to distinguish between mind base and mind door. it is therefore, not wrong to say that as far as this sensuous and the form worlds are concerned all thoughts arise dependent on matter. For a discussion on its location see Appendix A. pp. 288–293.

existing like a crocodile, delighting in deep water. The physiological teaching is that it is the organ of corti, situated deep in the internal ear that is filled with fluid.

The sensitive elements of smelling, or the nose base, is described as being in the cloven part of the nostril, with the nose cognition existing like an eagle that delights in a life high up in the sky. The physiological teaching is that it is in the cleft over the upper turbinal bone and the adjacent nasal septum.

The sensitive element of tasting, or the tongue base, is in the middle of the tongue, in an area like a lotus petal that has been cut, with the tongue cognition existing like a dog, that rejecting mats given to it, will prefer the heap of ash on the hearth. The physiological teaching is that the taste buds are mostly found in certain areas of the tongue, especially the posterior third, where the circumvallate papilla, having a central depression and surrounded by a moat, exists.

The sensitive element of touching, or the body base, is everywhere in the body, except at the base of the hairs and the nails and in the places of dried-up skin, with the body cognition existing like a jackal that lives in the forest, delighting in gross things like carrion—the three elements of hardness, motion and heat, which stimulate it, being the carrion. The physiological teaching is that touch, cold, heat, and pain spots are intermingled with one another, on the surface of the skin, and deeper in it are sensations, such as pressure, movement, and pain that come from the internal structures like muscles and joints.

The physical element on which the remaining thoughts arise

The physical element on which, the group of three thoughts called the mind element, and the seventy-two thoughts of the group called the mind cognition element arises, is called the mind-base or heart element (*hadaya rūpa*).

It is legitimate then, to think of these sense bases[1] as the peripheral conditions of mind. On the other hand, the 'base' called the heart or mind-base refers to the more central condition of mind. In fact, these six elements have been grouped under the single term *vatthu rūpa*, resembling the term nervous system, which is widely accepted as being related to thoughts.

Again the division of thoughts, barring the sensations (*viññāna dhātu*), into two classes, namely, the mind element (*mano dhātu*) and the mind cognition element (*mano-viññāna-dhātu*) and both depending on this heart or mind-base element seems to suggest a teaching similar to that of physiologists, as the higher and lower centres, in the brain and the spinal cord, of the one central nervous system.

7. The conditions, in general, for the arising of thoughts

We may now state the conditions for the arising of thoughts. Those for the sense cognitions (*viññāna-dhātu*) are: 1. normality of the sensitive element, 2. the presence of the sense object, 3. the help of a medium, 4. the attention by the mind (apprehending-at-the-five-senses). The medium in the case of sight is light; in the case of hearing, it is space; in the case of smell, it is air; in the case of taste, it is a liquid; in the case of touch, it is the hardness element in one's own body.

The conditions for the arising of the mind cognition element (*mano-viññāna-dhātu*) anywhere, except in the formless worlds, are: 1. the existence of the life continuum thought; 2. there being a mental or a sense object; 3. presence of the mind-base element; and 4. the attention by the mind (apprehending-at-the-mind). In the formless worlds, only those thoughts that can arise independent of

[1] For the physiological drawings of these, see Appendix A. pp. 279–288.

the mind-base do so. If any of these conditions should be absent, the particular kind of thought will not arise.

Thus, we see here, one aspect of the interaction between mind and matter, i.e., of matter on mind. The other aspect namely, that of mind on matter, is given in Chapter IX in the section on the relation of thoughts to present action (ideo-motor action) and to future effects. We also understand that thoughts are of momentary duration, and arise due primarily to impact of object (*ālambaṇa*) on receptor (*dvāra*). This is of significance in understanding the no-soul doctrine. It would be also well to remember, that mind is different from matter, and has no spatial relations.

In the foregoing chapter, we studied questions like the place of feelings in our lives; the real reasons which influence us in our thoughts and actions; what are the different kinds of activity engaged in by thoughts; what are the physical elements on which the different thoughts depend for their existence; what are the objects of thoughts; and what is the mechanism that brings about a response to a stimulus. The Chapter on Dynamic Psychology, and the Appendix, will show the interconnection between these several aspects so as to secure to the organism a harmonious reaction to sense impressions and ideas.

Part Two: The Science of the Mind

CHAPTER V

THE FORMS OF THOUGHT

WE have said that a thought unit consists of the cognition element and a varying number of mental factors. We may consider their various combinations in the units as the forms of thought:[1] and as pertaining to a description of the cognition element, the most important member of the unit.

In an earlier chapter, three different kinds of life, as associated with the sense plane, the form plane and the formless plane, were mentioned. In the present one, we shall consider the sub-classification of the thoughts connected with these planes, and the fourth category called the supramundane thoughts.

A. The Thoughts of the Sensuous Beings or the Thoughts of the Sense Plane (*Kāmāvacara Citta*)[2]

First, let us consider the thoughts of the sense plane as in a world such as ours. In this category we distinguish four kinds of thoughts called the moral, immoral, inoperative and resultant thoughts. Here the term sensuous (*kāma*) means the sense object (*vatthu kāma*) as well as the desires or cravings in it (*kilesa kāma*). These are, therefore, the objective and the subjective aspects of desire.

[1] The nature of this cognition element is essentially the same in all thoughts. It is given as that which knows the object in its varied forms as color, sound, and touch; as sensuous, sublime, supramundane, etc. there are only shades of difference between this, the noting (*saññā*) and the wisdom (*paññā*) elements.

[2] They are called thoughts of the sense plane because the beings of the worlds belonging to this plane have mostly thoughts in which are desires in things of these worlds; and to which they attach great importance. All these thoughts generally occur to gods, men, animals, spirits and purgatory beings. Some of them develop the other kinds of thought, while in these worlds.

Characteristics as Defining and Accompanying[1]

Now a thought unit is made up of a number of characteristics, otherwise a cognition element and several non-cognitive elements or mental factors, i.e., *citta* and *cetasikas*. It is also the case that only some mental factors are common to all thoughts and others are not. Then it is possible to make use of these elements that are common, or bear common features (*sabhāga*), such as the occurrence generally to beings of that kind of life, in order to group them together. This saves us from the need to mention all the characteristics common to a class, each time we wish to speak of or want to identify a thing by name. Thus, when we speak of thoughts of the sense plane we mean only fifty-four thoughts; or if we speak of moral thoughts, we mean twenty-one thoughts; and so on. We can also make use of elements or features that are not common to the class (*visabhāga*) in order to make distinctions within the group, i.e., to give names. These are therefore defining characteristics. The remaining characteristics are the accompanying characteristics.

1. The Moral thoughts (*Kusala Citta*)[2]

Defining Characteristics

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[1] See *Introduction to Philosophical Analysis* by John Hospers, Ch. I, pp. 26–38.

[2] **The Eight Moral Thoughts of the Sense Plane** (*Mahā Kusala Citta*)

1. The moral thought with happiness, with wisdom and spontaneous.
2. The moral thought with happiness, with wisdom and induced.
3. The moral thought with happiness, free from wisdom and spontaneous.
4. The moral thought with happiness, free from wisdom and induced.
5. The moral thought with indifference, with wisdom and spontaneous.
6. The moral thought with indifference, with wisdom and induced.
7. The moral thought with indifference, free from wisdom and spontaneous.
8. The moral thought with indifference, free from wisdom and induced.

Accordingly, in this class of moral thoughts of the sense plane, we are able to identify eight different kinds of moral thoughts by making use of the characteristics that are not common to the thought unit in that class. This defining, and so giving names, is based on a composite classification, i.e., on three differentiating criteria and not on one characteristic alone. They pertain to: 1. the kind of feeling such as happiness or indifference; 2. the manner of coming into being; i.e., whether the thought is spontaneous and effortless in the arising, an act of the will; or is done with deliberation;[1] 3. the presence or absence of the Wisdom element. Thus one thought unit is given a name from the fact, that it arises effortlessly, has happiness and is accompanied by wisdom, by a combination of these criteria; yet another thought unit is named from the fact, that it has indifference, is without wisdom, and is induced. What constitutes the moral nature of these eight thoughts, or their common relational features expressed in the term moral, are: that they expel, otherwise keep off evil; and also lead to agreeable effects; their state of purity; and the fact that they are conditioned or aroused by the correct knowledge of the object. In assigning names, we are thus making use of similarities in giving class names, and dissimilarities in giving individual names.

Their Accompanying Characteristics.

Besides these defining elements, virtues such as confidence, mindfulness, dread of evil, right speech, right action, right livelihood and joy, which are other mental elements, also arise and may be found in these moral thoughts.[2] They are, therefore, their accompanying

[1] *General and Social Psychology* by H. R. Thouless p. 244, section on Impulsive and Volitional action.

[2] The Moral elements that arise in these thoughts are the total of the defining and the accompanying characteristics. They are the nineteen that are called the wholesome common elements, invariably, together with, it may be, one of the five constituting

characteristics. Hence cultivating these virtues also means to have moral thoughts. But these accompanying characteristics are not needed for the purpose of assigning names and of classification. The nature of these elements will be described under the wholesome mental factors.

Relation of Moral Actions to Moral Thoughts

Now, actions are done on account of thoughts, and so the importance of moral thoughts rests on this fact, that they are responsible for the ten kinds of moral action.[1] That is to say, it is the eight kinds of moral thoughts containing one or other virtue which lead to the ten moral acts (*dasa kusala*). They are: charity, moral habits, meditation, respecting, and ministering to the worthy, offering, and acceptance of merit, preaching, and listening to the Dhamma, and rectifying false views.

The Conditions Contributory to Thoughts Being Moral

The understanding of what is right and proper to do, and why; the ability to reflect introspectively; and the practice and skill in moral habit is required of one who desires to arouse such thoughts, in order to lead a better life and obtain the fruits thereof.

Abhidhamma teaches not only the nature, but also the conditions of thoughts, i.e., what factors are contributory to: thoughts being moral, to the having of wisdom, to the

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the abstinences and illimitables, and the wisdom, suitably. Thus when a person wishes to abstain from evil speech, in any of its four forms the right speech factor (*sammā vācā*), will arise in that thought, but not the other four. See also p. 96 *Fig.* 14.

[1] Physical and verbal actions (*kriyā vatthu*) are the expressions of thoughts that arise in the stage of impulsion in the thought processes of the mind avenue. The volition in each of those thoughts formulates its own thought unit and can also formulate the particular form of movement by the generation of the physical elements called the intimating elements (*viññatti rūpa*). See Ideo-Motor Action, pp. 196–197.

different kinds of feeling in them, and to thoughts being spontaneous.

Causes as Immediate and as Predisposing

A living being has certain tendencies which predispose him to various kinds of moral or immoral actions. These tendencies may be of an innate nature, because of past practices, or they may be acquired. The causes should therefore be considered as being immediate and as predisposing.

The immediate causes of morals are: the existence of the situation or the presence of the object: the motives or roots;[1] and correct grasp of phenomena, in both the apprehending and the determining stages of a thought process. the predisposing causes are: hearing the Dhamma; holding correct views or being free from false views; having innate dispositions from engaging in moral action in past lives: having the good fortune to live in places where conditions favoring moral actions exist, and associating with good people (*kalyāṇa mitta*).

The Moral Thoughts According to Roots, Basic Motives

If we classify these thoughts according to roots, i.e., the presence of the mental factors of non-attachment, non-ill-will, and non-delusion, there are four thoughts that are accompanied by three roots[2] (*tihetuka*), and four thoughts that are accompanied by two roots (*dvihetuka*). The latter are the thoughts without wisdom.

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[1] Though we are accustomed to think of some thoughts as being non-ethical, yet if we should examine the motives of those thoughts we shall find that they fall into a moral or immoral class.

[2] Wisdom as non-delusion is found in the thoughts with three roots, but not in those with two roots. So that it is not essential that there should be wisdom for a thought to be moral. The presence of the other wholesome mental factors can make a thought moral. See p. 118 n. 2.

2. The Twelve Immoral Thoughts (*Akusala Citta*)

Turning to the class of immoral thoughts, or those that have the common features of suppressing morality,[1] and yielding disagreeable effects, we have a classification into twelve such thoughts. They are grouped into three divisions, on the basis of, whether the motivation is one of attachment, ill-will, or delusion.

The Thoughts Rooted in Attachment.[2] These include eight immoral thoughts that are classified, like the moral thoughts, on three composite criteria; namely, the kind of feeling, the manner of coming into being, and the presence

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[1] As with matter, where there are forces tending to hold the molecules together and forces tending to disrupt them, so are *kusala* and *akusala* antagonistic and mutually suppressive. This may be similar to the notion of the divided self.

[2] **The Eight Immoral Thoughts Rooted in Attachment** (*Lobha Mūlika Cilta*)

1. The immoral thought with happiness, with false view and spontaneous.
2. The immoral thought with happiness, with false view and induced.
3. The immoral thought with happiness, free from false view and spontaneous.
4. The immoral thought with happiness, free from false view and induced.
5. The immoral thought with indifference with false view and spontaneous.
6. The immoral thought with indifference with false view and induced.
7. The immoral thought with indifference free from false view and spontaneous.
8. The immoral thought with indifference free from false view and induced.

The immoral elements that constantly arise in them are the four elements common to immoral thoughts, i.e., ignorance, shamlessness of evil, non-dread of evil, restlessness, together with attachment. The elements of false view, conceit, sloth and torpor may arise on occasion and in suitable manner. The roots of these thoughts are attachment and delusion. For the nature of the immoral roots and the mental elements see the immoral mental factors.

or absence of false views. By attachment is meant a state of being attracted to the object while perceiving that object. Desires, cravings, likes, longings, greeds, loves (as distinct from friendliness) are its synonyms.

The Thoughts Rooted in Ill-will.[1] There are two classes of thoughts of ill-will or aversion. the accompanying elements therein are: hatred, envy, jealousy and remorse. These thoughts are always accompanied by unhappiness and aversion towards the object. By aversion is meant a state of agitation with repulsion while perceiving the object.[2] Fears[3] and anxieties are forms of ill-will.

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[1] **The Two Immoral Thoughts Rooted in Ill-will** (*Dosa Mūlika Citta*)

1. The immoral thought with unhappiness, aversion and spontaneous.
2. The immoral thought with unhappiness, aversion and induced.

The immoral elements that constantly arise in them are the four elements common to immoral thoughts, together with ill-will. The elements of envy, jealousy, remorse, sloth and torpor may arise on occasion and suitably, their roots are ill-will and delusion. All these mental states except sloth and torpor are always accompanied by unhappiness. Anger, fear, disappointment, grief, despair, pain of mind are types of states of ill-will and unhappiness in different situations.

[2] The objects of such thoughts with ill-will as their roots, may be persons or things existing distinctly or vaguely (*dasa āghāta vatthu*) and as causing harm or loss. There are nine causes, otherwise 9 ways, in which the object is viewed as to arouse anger. These are: three by which the object has caused, is causing or is likely to cause harm to the person, i.e., the subject him-self: three in the above three periods in causing harm to his friends; and three similarly in respect of helping his enemies. The tenth cause is the vague object that is grasped without rational meaning as in being upset on account of the day being very hot, or very rainy, at not being accosted by a friend.

[3] Psychologists too identify fear with rage for the physical effects of both are similar. During these states neither affection nor desires can be aroused. Fears may be of conscience (*attānuvāda bhaya*),

The Thoughts Rooted in Delusion.[1] Though lack of understanding is a common feature in all evil, these two are characterized by the strong nature of delusion, in them. Doubt, described as a state of fatigue, is a feature in one thought, and a marked restlessness or a state of bouncing, agitation, or tension is found in the other.

The Relation of Immoral Actions & Immoral Thoughts.

It is these twelve immoral thoughts, containing one or other evil state, which give rise to the ten immoral acts (*dasa-akusala*). They refer to: the three acts of the body, i.e., killing, stealing and adultery; the four evil acts of speech, i.e., lying, tale-carrying, abuse and idle talk; and three evil acts of mind, i.e., covetousness, hatred and false views. Of these acts, killing, abuse or the use of harsh words, and hatred, spring from the root of ill-will. Adultery, covetousness, and false views spring from the root of attachment. The remaining four—stealing, lying, tale-carrying, and idle talk spring from either root, i.e., ill-will or attachment. Since the motives of attachment, ill-will, and delusion are the unrecognized but profound causes of the thoughts in these divisions, the Buddha's teaching emphasizes the need for getting rid of the evil motives as an important means to refrain from evil actions and to cleanse the mind of its many impurities and defilements.

3. The Inoperative Thoughts (*Kriyā Citta*)

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of others (*parānu bhaya*), of stick (*daṇḍa bhaya*) of lower worlds (*duggati bhaya*).

[1] **The two Immoral thoughts Rooted in Delusion** (*Mohamūlika Citta*)

1. The Immoral thought with Doubt.
2. The Immoral thought with Restlessness.

The Immoral elements that arise in them are the four elements common to immoral thoughts, together with doubt in the case of the first thought. They have only one root, namely, delusion.

The third kind of thoughts of the sense plane pertains to the thoughts called the Inoperative thoughts. They differ from moral and immoral thoughts, in that they have, as their common feature, the fact that they yield no future effects. That is, they are ineffective or inoperative as regards the future. They also differ from the resultant thoughts, which too, do not yield future effects, in that inoperative thoughts are not effects of past actions.

These inoperative thoughts are of two kinds: those with roots and those without. The former,[1] like the moral and immoral thoughts, arise in the impulsion stage of a thought process, because it is with these thoughts that an *arahant* acts and thinks. Since, by definition, moral and immoral thoughts are productive of effects, agreeable or disagreeable, we can see why an *arahant*, who has no future life, should have some distinctive feature in his thoughts of action and so constitute another class of thoughts.

As the other group of this class, in that they have no roots, we have three thoughts[2] that arise to function, as

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[1] **The Eight Inoperative Thoughts with Roots** (*Maha*, or the *Sahetuka Kāmā- vacara Kriyā Citta*)

They are named in the same manner as the eight moral thoughts but replacing the word moral by the word inoperative.

[2] **The Three Inoperative Thoughts without Roots** (*Ahetuka Kriyā Citta*)

There are three thoughts which are without roots. They should not be thought of as being unconditioned, because they have other conditions such as the object etc.

1. The 'apprehending-at-the five senses' thought.
2. The 'apprehending-at-the-mind' thought.
3. The laughter genesis or 'aesthetic pleasure' thought.

The 'apprehending-at-the-five-senses' and the 'apprehending-at-the-mind' arise as the initial thought in the thought processes of the sense avenue and of the mind avenue, respectively. See p. 102 *Fig.* 16, and p. 104 *Fig.* 17. For their functions, see pp. 103–104.

apprehending objects or causing awareness, and as causing a smile in *arahants* in subtle things.

4. The Resultant thoughts (*Vipāka-Citta*)

The last of the four different kinds of thoughts of the sense plane, are the resultant thoughts. All these, like the inoperative thoughts, do not yield further effects, but differ from them, in that they arise as the conscious effects of moral and immoral actions of a past life. Some of these resultants have roots[1] and the rest are rootless. Of the rootless ones, some are the effects of immoral actions[2] in the past, and the others are effects of moral actions of the past.[3]

The 'laughter genesis' thought arises to *arahants* to cause a smile in things that may appear to worldlings as being trivial. It arises in the stage of impulsion in the sense avenue.

[1] **The Eight Resultant Thoughts with Roots** (*Sahetuka Kāmāvacara Vipāka Citta*)

There are eight thoughts that are named in the same manner as the eight moral thoughts of the sense plane; but replacing the word 'moral' by the word 'resultant' See p118 n. 2.

[2] **The Seven Immoral Resultant Thoughts without Roots** (*Akusala Vipāka Citta*)

1. The eye cognition that is accompanied by indifference.
2. The ear cognition that is accompanied by indifference.
3. The nose cognition that is accompanied by indifference.
4. The tongue cognition that is accompanied by indifference.
5. The body cognition that is accompanied by pain.
6. The recipient thought that is accompanied by indifference.
7. The investigating thought that is accompanied by indifference.

They all function in respect of disagreeable objects.

[3] **The Eight Moral Resultant Thoughts without Roots** (*Ahetuka Kusala Vipāka Citta*)

1. The eye cognition that is accompanied by indifference.
2. The ear cognition that is accompanied by indifference.
3. The nose cognition that is accompanied by indifference.
4. The tongue cognition that is accompanied by indifference.

The function of the rootless resultant thoughts[1] is evident in that part of the thought process which is passive, such as the cognizing, receiving and investigating and registering of an object, described in Ch. IX section on thought processes. They assist in the buildup of the idea or the mental construct, out of the given sense data. The functions or causing rebirth, life continuum, and death, (see Ch IX section on process-freed-from-avenues) and of registering, may be done by either kind of resultant thought, i.e., by those with roots or those without roots, in suitable manner.[2] These resultant thoughts constitute an important link in the explanation of life as a causal web or chain. According to this teaching, a living being did moral and immoral acts in the past, as a result of which he gets the atoms born of past-action and the resultant thoughts, to enable thought processes to function in a new life. These effects enable the material body also to take shape and grow; during the course of this life, in the thought processes that then set in,

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5. The body cognition that is accompanied by ease.
6. The recipient thought that is accompanied by indifference.
7. The investigating thought that is accompanied by indifference.
8. The investigating thought that is accompanied by happiness.

They all function in respect of agreeable objects.

[1] For their places in the thought process, see p. 102 *Fig.* 16 and p. 104 *Fig.* 17; for the functions of these thoughts, see p. 103.

[2] As regards the function of causing rebirth, to all beings of the sub-human existences the rebirth thought (*paṭisandhi viññāna*) is the investigating thought that is an immoral resultant. To unfortunates among men, such as the congenitally blind and deaf or crippled, it is the investigating thought that is a moral resultant and is accompanied by indifference. The remaining human beings and devas, i.e., those with two roots or those with three roots have any one of the eight resultants with roots as their rebirth thought. As regards the life continuum and the death thought, it is a rule that what becomes the rebirth thought arises also as life continuum and death. It is the same thought in respect of structure but the function is different in each case. See pp. 206–208 and 208 n. 2.

there occur, in the impulsion stage, the moral and the immoral thoughts with which he again does moral and immoral acts; thereby he repeats the process, and so causes the occurrence of future life. This is the 'Wheel of Life'.

We now have 54 thoughts as belonging to the sense plane. They are made up of 12 that are immoral, 18 that are rootless, and 24 that are wholesome. The 18 rootless are made up of 7 that are immoral resultants, 8 that are moral resultants and 3 that are inoperative. The 24 wholesome are made up of 8 that are moral, 8 that are resultant, and 8 that are inoperative.

B. The Thoughts of *Brahmas* with Form, or the Thoughts of the Form Plane (*Rūpāvacara Citta*):

We now come to thoughts that are regarded as essentially belonging to the form plane of existence and occurring often to *rūpa brahmas* or *brahmas* with form. A person, who wishes to obtain the higher life, for the sake of a more subtle or greater happiness, practices moral restraints or moral habits (*sīla*), and engages in meditations.[1] Such a person's mind becomes tranquil as a result of the expulsion of certain impurities that are called hindrances (*nīvaraṇa*). These are: sensual desire, hatred, sloth-torpor, restlessness-remorse, and doubt. Thereby he achieves[2] the moral thought of the first trance[1] in a special

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[1] He selects out of 40 subjects, namely, the ten *kasiṇa*, the ten *asubha*, the ten *anussati*, the four *brahmavihāra*, the four *ārupa*, the *eka saññā* and the *eka vavaṭṭhāna*, either the one that is most suited to his temperament or one of the general ones, as the subject of the meditation.

These temperamental types are of six kinds: the lustful (*rāga carita*), the angry or the bilious (*dosa carita*), the foolish (*moha carita*), the confident (*saddhā carita*), the intelligent (*buddhi carita*), and the discursive (*vitakka carita*).

[2] It is only a person who has a rebirth thought with three roots (*tihetuka paṭisandhi*), who can experience these sublime thoughts. See also Tranquility Meditations, for the meditation procedure.

thought process. This thought has five trance constituents or mental elements, namely, initial application, continued application, joy, ease, and one-pointedness of mind or concentration. It is these which, at the moment of trance, function strongly to suppress[2] the said five mental impurities or the hindrances.

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[1] **The Five Moral thoughts of the Form Plane** (*Rupāvacara Kusala Citta*)

1. The moral thought of the first trance that has initial application. continued application, joy, ease and concentration (*paṭhamajjhāna kusala citta*).
2. The moral thought of the second trance that has continued application, joy, ease and concentration (*dutiyajjhāna kusala citta*).
3. The moral thought of the third trance that has joy, ease and concentration (*tatiyajjhāna kusala citta*).
4. The moral thought of the fourth trance that has ease and concentration (*catutthajjhāna kusala citta*).
5. The moral thought of the fifth trance that has equanimity and concentration (*pañcamajjhāna kusala citta*).

For the thought process in which the trance thought occurs, see p. 190 *Fig.* 26.

[2] The suppression of the five hindrances by the constituents is a natural one being that by its opposite nature. Thus initial application whose nature or function is the lifting of mind on to the object carries out the suppression of laziness, otherwise sloth and torpor or boredom, whose nature is to regard the object as unwelcome. The continued application whose nature is the binding of the mind on the object, suppresses the hindrance of doubt, whose nature is the flitting of the mind from object to object. The joy element whose nature is the thrilling of the mind in the object, suppresses the hindrance of hatred, which is always accompanied by unhappiness. The ease element, which has the nature of quietude and composure of mind, suppresses the hindrance of restlessness and remorse whose natures are to cause a disturbed state of the mind as in doing evil and in brooding over the past respectively. the concentration element whose nature is to cause the mind to stay long in an object, suppresses the hindrance of desires for sense pleasures whose nature is to cause a wandering or spreading state where the mind flits from one thing

The latter are so called because they are obstacles to spiritual progress,[1] or the attainment of the higher states. The word 'trance' is tied up so much with mysticism that it is used only for want of a better word. In Buddhism there are no mysteries or any phenomena that are above natural law. As stated earlier these trances are mental states, which may be won by following certain practices according to instruction.[2]

After becoming skilled in that meditation, the meditator proceeds further with the intention to acquire still subtler thoughts and feelings, and he next obtains the moral thought of the second trance, which has only four trance constituents. In this way, there arises in proper order five

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to another on account of attachments, hatreds and worries. When these constituents are together present and function as trance, there comes into being a thought of a different order of life. That is from that of the sense plane, to that of the form plane also called the sublime thought.

[1] The Hindrances consists of seven elements but are reckoned as five groups because of similarities in function of Restlessness and Remorse in one of the groups, and of Sloth and Torpor in the other; See Ch. IX on Expulsion of Evil, p. 209.

[2] Voluntary attention on an object usually is not sustained for long. This is on account of certain impurities or defilements of the mind called the Hindrances. That can be remedied by practicing Meditations on certain topics that will not quickly go out but will develop a certain power that is called a faculty. Five such Faculties (*Pañcendriya*) are: Confidence in the Teacher and the Teaching (*Saddhā*), Mindfulness of the real nature and worth of things (*Sati*), Effort, Energy or Will Power (*Viriya*), keeping the mind long on the object or bringing the topic again and again (*Samādhi*) and Wisdom (*Paññā*). That practice leads to the advent of a state of mind called Trance. Five Constituents of that Trance state, severally and jointly, suppress five of their naturally opposite natures, mentioned earlier, and so render the mind calm, joyous and peaceful.

moral thoughts associated with the five trances of the form plane; each trance being superior to the one below it.

Superintellection (*Abhiññā*)

The fifth trance can also be entered in a special way as to enable the meditator or yogi to acquire special powers called superintellection (*abhiññā*).[1] That thought, however, is different in quality, but is not different in structure from the fifth trance thought.

The development of these higher intellectual faculties not only produces an ability to suppress evil, but also brings with them the attainment of worldly powers, transcending the barriers of time and space and of physical laws. Whereas the former is desirable, the latter are not without risk, for the possessor may use them for wrong ends. Those who are aware of research into extra sensory perception and its closely related problem of spirit manifestations might be struck by their parallelism with superintellection. One difference, however, between them is that, whereas in E. S. P., such abilities are stated to occur in stray individuals, in Buddhist teaching they may be acquired.

But the total number of thoughts of the form plane which is 15, comprises also their corresponding resultant[2] and

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[1] They are: hearing at distances or divine hearing (*dibba sota*); divine sight (*dibba cakkhu*); remembering past lives (*pubbe nivāsānussati*); ability to read others' thoughts or telepathy (*paracitta vijāñāṇa* or *ceto pariya ñāṇa*); exercise of various psychic powers such as traversing the sky, causing one to appear many, sinking into the earth (*iddhi vidha*, *manomaya*).

Included in divine sight are: 1. seeing the rebirth process in respect of past lives (*cutūpapāta*), 2. knowledge of future births (*anāgataṇsa*), and 3. knowledge of what actions caused the past births (*yathā kammūpagata*).

[2] **The Five Resultant Thoughts of the Form Plane** (*Rūpāvacara Vipāka Citta*).

inoperative thoughts[1] on lines similar to those described earlier under Thoughts of the Sense Plane. There are five thoughts in each of these three classes. The resultant thoughts of this class are the conscious effects of the moral trance acts of the past. They arise to perform the functions of rebirth, life continuum and death in the next life as a brahma. That life is the natural effect of the transformation the personality has undergone on account of such trance acts. The inoperative thoughts of this class arise to *arahants* when they engage in these trances.

C. The Thoughts of *Brahmas* without Form or the Thoughts of the Formless Plane (*Arūpāvacara Citta*)

Coming to the third category or highest of the thoughts belonging to the different kinds of mundane existence, we have the trance thoughts of the formless plane. They are obtained by meditation on immaterial things, and generally occur to *brahmas* without form (*arūpa brahmas*). These moral thoughts[2] are four in number, and arise with four

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There are five thoughts whose names are similar to the above five moral thoughts except that the word resultant replaces the word moral (p. 129 n. 1). One function of these resultant thoughts is to cause rebirth in the form plane. Thus they arise as the initial or rebirth thought in the worlds of the form plane to *brahmas* with form. This occurs at the time of the death-rebirth period of the being who has at some time previously during that life developed ecstasy or trance and in whom the power of that trance yet exists.

[1] **The Five Inoperative Thoughts of the Form Plane** (*Rūpāvacara Kriyā Citta*).

Likewise there are five thoughts whose names are similar to the five moral thoughts except that the word 'inoperative' replaces the word 'moral.'

[2] **The Four Moral Thoughts of the Formless Plane** (*Arūpāvacara Kusala Citta*)

1. The moral thought with the concept of infinity of space (*akāsānañcāyatana kusala citta*).

immaterial things as their thought objects. The first of them is obtained by meditating on the concept of the infinity of space; the second by meditating on the infinity of that first trance thought; the third is on the concept of nothingness; and the fourth is on the sublimity of the thought on nothingness.

The Meditation Procedure

In the trances of the form plane, the yogi makes thoughts more and more subtle by suppressing the grosser constituent. When he finds that he cannot proceed further on these lines, he makes a new approach by changing the thought object. Beginning with the meditation symbol of the kasina light, he applies that on space, and withdraws it, and he conceives the notion of infinity of space. Proceeding further, it strikes him that the thought which can conceive of an infinite object, must itself be infinite. Next, it occurs to him that with the second thought the first is no more, and he contemplates on nothingness or absence. Finally, he contemplates on the sublimity of that thought, and gets the fourth formless thought. This is so subtle, that it can hardly be said to exist.

Corresponding to these four moral thoughts, we have resultant and inoperative thoughts[1], as before; so that we

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2. The moral thought with the concept of infinity of thought (i.e., of the first moral thought) (*viññānañcāyatana kusala citta*).
3. The moral thought with the concept of nothingness (*ākincaññā-yatana kusala citta*).
4. The moral thought of neither perception nor non-perception (*neva-saññā nāsaññā yatana kitsala citta*), i.e., a thought so subtle that it can hardly be said to exist.

[1] If a person has developed these moral thoughts at some time in this life, then at the time of death there arises the resultant of these trance thoughts, in such formless plane as a rebirth thought. That procures to the being a life in one of the four worlds of the formless plane as is suited to the particular trance he had attained.

end with twelve thoughts belonging to the formless plane. The trance constituents of these thoughts are concentration and equanimity. Hence, these twelve thoughts are classed as belonging to the order of the fifth trance.

D. The Thoughts of the Saints or the Supramundane Thoughts (*Lokuttara Citta*):

It is only the person, who has practiced the noble eight-fold path and has reflected on and realized the individual and the general characteristics, particularly the three marks in phenomena, otherwise developed the insight wisdoms (*vipassanā ñāṇa*), that can, someday, experience with these thoughts a momentary vision of *nibbāna*. This, he may attain in two ways. He may choose a direct approach by practicing insight meditation, such as the establishment of mindfulness (*satipaṭṭhāna*), or he may choose the indirect approach by first acquiring the trances of the form and formless planes and planting insight on any one of them. Those who try the former are called the pursuers of the direct approach, (*Sukkha Vipassaka*), —literally 'dry visioned'. Those trying the latter are called the pursuers of the indirect approach (*Samatha Yānika*). These latter will have, in the supramundane thoughts they get, the quality of the trance order, which they meditated on or desired to get.

These thoughts arise in a thought process called a supramundane trance process. His personality is now again radically changed and he is called a saint. Saintliness means, in Buddhism, not merely the suppression of evil and the development of morals, but also the eradication of the illusions through the purification of vision (*diṭṭhi visuddhi*). The appearance of visions and hallucinatory phenomena,

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As with the resultant and the inoperative thoughts of the form plane, so are there similar thoughts in this class of thoughts performing similar functions. The words 'resultant' and 'inoperative' are used to replace the term 'moral' in giving them names. See p. 132 n. 2.

the possession of special extra sensory abilities, the excessive mortification of the flesh, and the abandoning of wealth do not turn a worldling into a saint. The characteristic of these supramundane thoughts is that they are intimately associated with, and arise taking only the thought object of *nibbāna*. Since these thoughts transcend and are superior to mundane thoughts or the thoughts of the three planes of existence we call them 'supramundane'. The term mundane existence (*loka*) signifies an incessant breaking down of mind and matter, i.e., momentary existence. The term supramundane, applied to these thoughts and to *nibbāna*, connotes that which has no such transitory nature i.e., the state of *nibbāna* itself, or that which lifts one above the three-fold worlds of space, of living beings, and formations.

Unlike in the other classes of thoughts there are only two divisions of supramundane thoughts: the moral or the path, and the resultant or the fruition thoughts. There are no inoperative thoughts. That is for the reason that where good acts are done by worldings with moral thoughts, such acts are done by *arahants* through the occurrence of inoperative thoughts. Such is not the case with supramundane thoughts. Their function is the destruction of defilements; since that has already been accomplished by the path thoughts, no useful purpose can be served by an Inoperative class of thoughts.

The Path Thoughts (*Magga Citta*)[1]

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[1] **The Four Moral Supramundane Thoughts** (*Lokuttara Kusala* or *Magga Citta*)

1. The path thought of the stream winner (*sotāpatti magga citta*).
2. The path thought of the once returner (*sakadāgāmi magga citta*).
3. The path thought of the non-returner (*anāgāmi magga citta*).
4. The path thought of the highest saint or arahant (*arahatta magga citta*).

For the thought process in which the path and the fruition thoughts arise, see p. 190 *Fig* 27.

So the first moral thought, having such a function, and taking *nibbāna* as the object, is the supramundane thought that is called the 'path thought of the stream winner'. It is called a path thought because it causes the *aryan* state or because it is the path that should be sought by those desiring nibbāna or because of its likeness to a way to *nibbāna* being opened up by the destruction of the defilements.[1] This individual is called the stream winner[2] because for the first time he has entered the stream which will end only in *nibbāna*. As he proceeds on this path the destruction takes place lot by lot, but at each stage the destruction is radical. Thus, we have the path thought of the once returner, where more defilements are virtually destroyed. Such a person returns or is reborn only once again in a sense plane. The

[1] The path thought of the stream winner is destructive of certain defilements termed 'fetters'. They are: false view of a self, belief in ritual, and doubt. See p. 27. The other defilements are thinned. The path of the once returner effects a thinning of other defilements or the fetters of lust for the sensuous and of hate. The path of the non-returner effects a destruction of the defilements thinned by the path of the once returner. The path thought of the highest saint effects a destruction of the remaining defilements or fetters, namely: lust for form existence, lust for formless existence, conceit, restlessness and ignorance. The ability of the path thought to destroy the defilements at their very roots is due to the presence of the *nibbāna* element as the object of these supramundane thoughts. This destruction is like that of a tree that is struck by lightning. It cannot sprout again. With each succeeding path thought, as the personality becomes superior, the destruction of the defilements goes on until with the path of the highest saint the destruction is complete.

[2] The term *sotāpatti* is derived from *sota* (torrent), *ā* (first) and *patti*, (arrival); *sakadāgāmi* is from *sakiṃ* (once), and *āgāmi* (returner); *anāgāmi* is from *nā* (not) and *agāmi* (returner); *arahatta* is from *araha* (the individual having the five qualities: worthy of worship, destroyed the defilements, broken the spokes of the wheel of life, not doing evil in secret, remote from evil on account of their absence) and *atta* (the state).

third occasion in which *nibbāna* is seen thus, i.e., by a moral supramundane thought, is the path thought of the non-returner. That is to say, this person never returns thereafter, i.e., after death, to a sense plane. Lastly, there is the path thought of the highest saint or the *arahant*. One, who has had this thought, will never again be born to any kind of life, for he has destroyed every vestige of defilement. This means that he has won his deliverance in that life itself. At death, this person passes into the state of *nibbāna* itself.

The Fruition Thoughts (*Phala Citta*)[1]

The resultant thoughts of these moral or path thoughts are known as the fruition thoughts; and they follow immediately upon the path thoughts. Even after the removal of the defilements by the path thoughts there remains a sense of fatigue or oppression on account of the defilements that had been in existence. The fruition thought functions to remove even these, and so enables the saint to enjoy a perfect bliss.

Totality of thoughts

The detailed classification of thoughts into these categories yields 89 classes of thoughts. This is made up of the 54 thoughts of the sense plane, 15 thoughts of the form plane, 12 thoughts of the formless plane, and 8 thoughts that are supramundane.

If, however, the person has chosen the indirect approach to the supramundane, then in each of the supramundane

[1] **The Four Resultant Supramundane Thoughts** (*Lokuttara Vipāka* or *Phala Citta*).

1. The fruition thought of the stream winner (*sotāpatti phala citta*).
2. The fruition thought of the once returner (*sakadāgāmi magga citta*).
3. The fruition thought of the non-returner (*anāgāmi magga citta*).
4. The fruition thought of the highest saint or arahant (*arahatta magga citta*).

thoughts there can be five trance orders, such as the first trance, second trance and so on.

So that, where the supramundane thoughts were reckoned as eight, they will now be reckoned as forty, and the total number of thoughts will not be eighty-nine but one hundred and twenty one.

In this way, we have studied the different forms of thoughts, as to whether they are sensuous, sublime or supramundane; and the different classes in each order as moral, immoral, resultant or inoperative. We saw how meaningful names were assigned to the individual thoughts in those classes. The content of a thought was to be seen as the sum of its defining and of its accompanying characteristics. Thoughts were also studied for their roots and other conditioning influences. We have indicated how motor actions or the physical and verbal acts, and states of mind such as neurosis, anxieties, passions are but the signs and symptoms of the main event, the thought unit; and how immorality can be suppressed and expelled by a morality of greater and greater sorts. The dynamic working of these thoughts will be described in Chapter IX. We shall then see, that these separate subjects are not disjointed studies but are interrelated, and ultimately get connected up to form a system known as the Four Noble Truths that have a practical bearing on the conduct of life.

CHAPTER VI

THE MENTAL FACTORS (*Cetasikas*)

Often we have referred to non-cognitive psychic elements or the mental factors, but have not considered them in detail. Hence, this chapter is about the fifty-two mental factors. In our last chapter we found that mental life is made up of different kinds of thought units. We also know that each unit has a cognitive element and a number of mental factors, that is, citta and cetasikas, otherwise different kinds of functions. We have to bear in mind that the function of the unit, which is a coördinated function by all the elements, is different from the functions of the elements composing that unit. These two functions may be considered as the atomic and the sub-atomic levels of activity. We have dealt with the constituents of the unit as the defining and the accompanying characteristics of thoughts. But the constituent elements[1] found in the different thought units vary in number and exist in different combinations like the atoms in molecules. Some idea of how this happens is suggested by the four-fold grouping of these elements. First, there are the universal mental factors, that is to say, they are found in each and every thought unit. Second, there are those which may arise irrespective of whether the thought is moral or immoral. In this sense, this group may be regarded as the particulars. The third group refers to those psychic elements found in only the wholesome thoughts, i.e., all thoughts except the rootless and the immoral ones. The fourth group is that found only in the immoral thoughts. The third and fourth groups are called the wholesome and the immoral mental factors, respectively. Let us look at each of these four groups of mental elements, to learn more of their nature.

[1] Some of them are described by Shand and by McDougall as the 'sentiments'. Their relation to elements should prove useful in experimental psychology.

A. **The Universal Factors** (*Sabba Citta Sādhāraṇa Cetasika*).[1]

First, there are the seven universal mental factors of contact, feeling, noting, volition, singleness of object, attention, and psychic life. They are found in every one of the eighty-nine thoughts.[2]

None of these, as indeed no non-cognitive element, for that matter, exists apart from knowing or the cognitive element, in any thought unit. Thus, there can be no feeling in a thing without at the same time knowing the thing. In the same way, one cannot love unless there is knowledge of the object of the love. In fact, the intimate relation between the cognitive element and the mental factors in a thought unit is further based on four common features. These are: that both kinds of elements arise, and cease, at the same time; further, in a particular unit of thought they arise taking the same thought object, and also have the same 'base' or the physical element dependent on which they come into being. That is, both kinds of psychic elements arise, dependent on the same physical element.

Now, we can briefly describe these universal mental factors giving each its distinctive characteristic. First, the contact element brings the mind to bear on the object. This enables the noting element[3] to note the characteristics of the

[1] The universals are: contact (*phassa*), feeling (*vedanā*). noting (*saññā*), volition (*cetanā*), singleness of object (*ekaggatā*), psychic life (*jīvitindriya*), and attention (*manasikāra*).

[2] So that while a whole process is concerned with a special aspect of mind such as memory or judgment, yet in each thought unit there are certain functions such as feeling, noting, volition, simultaneously with thinking. They are carried out by its constituents; and the unit as a whole has one of the fourteen functions stated earlier.

[3] Noting or associating, translated by some as perception (*saññā*) bears a resemblance to cognition (*viññāṇa*, *citta*) and to wisdom (*paññā*). All three are forms of knowing. The difference is

object, as would facilitate subsequent identification. This is the basis of memory. Together with this, there is the feeling element, which tastes the flavor of the object. Then there is the volition element which co-ordinates and directs the activity of each of the other elements, within the thought unit, in respect of the object. It also formulates its own unit as to cause physical actions, and also to yield future effects, like the planting of a tiny seed that will, in time and under suitable conditions, yield a plant.[1] In that formulating or striving, the element called singleness of object[2] serves to focus the elements of the thought unit on the specific object to the exclusion of other objects. The practice and

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illustrated by an analogy. A gold coin is given to a child, a villager and a goldsmith. Each one conceives it differently: the child knows it as a colored object; the villager knows it as something capable of procuring many things he needs; the goldsmith knows a great many things about it, such as its nature, impurities, tests, and purification. Likewise, noting makes a note of the object as being of such a color, of such a shape and size, etc., so as to identify it subsequently. Wisdom understands that object in respect of real unchanging nature, as the operation of the laws of cause and effect, and in relation to the insight wisdom, i.e., as being impermanent, impersonal, etc. Cognition is the medium which assists the diversification of thinking by the mental factors. It is compared to water in which variously colored dyes must be dissolved to give expression to the many ideas in a picture.

[1] This late effect is brought out by the asynchronous *kamma* relation (*nānā khaṇika kamma paccaya*) of past-action. Yet it can do so, only if there are other suitable circumstances such as parents, energy; nutriment, etc. See p. 223 for the two kinds of *kamma* relations.

[2] One-pointedness means the ability to prevent the mind from spreading to other objects and so to bind the other elements of the unit in that one object. When this element is well fixed in the moral object, it is called concentration (*samādhi*). When psychologists speak of the focal area and the marginal area of consciousness, it is probably this function that is meant.

development of this element leads to states of absorption or ecstasy or concentration.

Meanwhile the attention element[1] helps to keep the object before the mind. This is engaging in it so as to make the varying kinds of activity possible. The last of the universal elements is what is known as the psychic life element. This supports and maintains the existence of the stream of thoughts and of the body, as the water maintains the lotus leaf. And just as the lotus withers and dies for absence of the water, so the being dies when psychic life ceases to arise after that in the death thought.

B. **The Particular Factors** (*Pakiṇṇaka Cetasika*).[2]

Coming to the particulars, we have six mental factors that may or may not arise in a thought, even when no distinction as to ethical[3] class is made. One of that class we come across, is the effort element which energizes the mind

[1] It carries out this function on three occasions: at the time of the arising of the apprehending-at-the-five-senses thought and of the apprehending-at-the-mind thought; at the time of the deciding thought; and by this element in every thought moment. The first is the first thought of awareness in the thought processes in the senses and in the mind avenues, and so causing a turning from life continuum to thought process. The second is in the deciding thought that adverts to the impulsion stage. They are accordingly called *vīṭhipaṭipādaka manasikāra* and *javanapaṭipādaka manasikāra*. The third function lies in the engaging in the object by every thought unit of a process. This is called *ārammaṇa paṭipādaka manasikāra*. See p. 102 *Fig*. 16 and p. 104 *Fig*. 17.

[2] The particulars are: initial application (*vitakka*), continued application (*vicāra*), resolution (*adhimokkha*), effort (*viriya*), joy (*pīti*) and willingness (*chanda*). The universals and the particulars are sometimes classed together as the dissimilar or the neutral (*añña samāna*) elements.

[3] Effort can raise the factors of confidence mindfulness wisdom to the position of power (*bala*). By itself it can function as the four great efforts, faculties, etc.

to carry out strongly the functions of the mental elements. In Buddhism, will power is truly the ability to initiate and carry out actions. It is therefore, not an ability to determine the quality of the action which may be moral or immoral. then there are the two elements of initial and continued application[1] which lift and bind the mind to objects this, in other words, is to initiate a thinking (*kalpanā*) and to continue to dwell on the subject. To these, must be added the resolution element, which points to the firm and fixed decision in objects, whether moral or immoral. Resolution is absent in the doubt thought and in the sense cognitions. It differs from confidence (*saddhā*) in that the latter arises only in moral things.

Of the two remaining elements, joy denotes the thrill in the anticipation of the agreeable object, occurring in the states of trance, and in a lesser way in early religious experience. In the latter it is known as '*pamojja*.' the last of these is the willingness element,[2] or interest, and is the wish to do the thing. This may be had without necessarily having attachment in objects. Thus, *arahants* can do various good deeds without there being attachment, desire or craving.

However, the general point to observe about these particulars is that they are found without distinction whether

[1] Volition, initial application and attention are much alike. In initial application (*vitakka*) there is application of the mind on the object. In volition (*cetanā*) there is an engagement of the mind in the object, like a general that directs the soldiers in their special tasks. Attention (*manasikāra*) is like the mind being tied up with the object like a charioteer that is mindful of the horses he has tied to the chariot.

[2] Buddhists distinguish between wishing and willing. Willingness which is like an outstretched hand can be allied to wishing and in this sense is often used in the discourses as desires in sense pleasure (*kāmacchanda*), desires in living (*bhava chanda*), and desires in sexual gratification (*methunasmiṃ chanda*). When the wishes are strong then it is called lust (*chanda rāga*).

thoughts are wholesome or immoral; but unlike the universals all of them need not necessarily exist in a thought. For instance, the sensations or the sense cognitions have none of these particulars and in thoughts with indifference, joy is not found.

C. **The Immoral Factors** (*Akusala Cetasika*)[1]

In the third group of mental factors there are fourteen that are known as the immoral mental factors. They can be found among only the twelve immoral thoughts. Of the fourteen immoral elements there are three, namely, attachment or greed, ill-will and delusion, which act as the fundamental motives or roots of evil action. The practical aspect in reducing all evil into three categories has been earlier mentioned.

The delusion element,[2] which is synonymous with ignorance of folly, blinds one as to the real nature of an object or event and is present in all immoral thoughts. It is powerfully suppressed by insight meditation. Attachment as a mental element bears the nature of being glued to the object and acts as a root. It is present only in the attachment rooted thoughts. Attachment, acquisitiveness, or desire may exist in the form of insatiation in one's possessions, as immoderation in the use of food and other requisites, and in

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[1] The immorals are: delusion (*moha*), shamelessness in evil (*ahirika*), non-dread of evil (*anottappa*), restlessness (*uddhacca*), attachment (*lobha*), false views (*diṭṭhi*), conceit (*māna*), ill-will (*dosa*), envy (*issa*) jealousy (*macchariya*), remorse (*kukkucca*), sloth (*thina*), torpor (*middha*), and doubt (*vicikicchā*).

[2] The delusion element (*moha*, *avijjā*) is by nature opposed to the wisdom element. In the immoral thoughts it functions along with the knowing element (*citta*). The wisdom element functions along with the knowing element in wholesome thoughts. The function of the wisdom element, the nature opposed to ignorance or delusion, is described as penetrating into the true nature of things like a light; whereas delusion is compared to that of darkness or covering up of that object.

acts to win applause. The ill-will element is the nature of aggressiveness and roughness of the mind; of polluting the individual; and of being repelled by the object. Ill-will may vary from being slight to desiring the destruction of the object. It is found in only the class of ill-will rooted thoughts. Ill-will and attachment; being dissimilar natures, are never present together in thoughts.

Yet the most common and general psychic elements in evil thoughts are delusion, shamelessness of evil, non-dread of evil and restlessness (*akusala sādhārana cetasika*). In other words, every evil act is carried out in addition to the specific features of attachment, or ill-will, etc., with the general features of ignorance, absence of conscience, without fear of consequences and in a state of excitement. This is in contrast with the peace accompanying moral acts. Intelligence (*buddhi*) may or may not exist along with this and other states. It is not identical with wisdom, which is found only in moral thoughts.

Of the other specific immoral elements present at the time of an action, in addition to the common immoral elements, we find false view, conceit and doubt.

False view is to see things in a distorted way. While sixty-two kinds are mentioned in the *Brahmajāla Sutta* they can all be put into two categories, from the principle of causal origin, as the view of permanency (*sassata diṭṭhi*), and as the view of nihilism (*uccheda diṭṭhi*). The views belonging to the first category have as their root cause the notion of a permanent soul. Those of the second category spring from the notion that death ends all.

False views may also be classified in respect of potency as the mild (*aniyata micchā diṭṭhi*), and as the grave (*niyata micchā diṭṭhi*). these grave ones are of three kinds: (1) that which rejects the effect (*natthi diṭṭhi*), as in saying there is no effect to actions, be they moral or immoral, (2) that which rejects the cause (*ahetuka diṭṭhi*), as in saying that beings are born without cause or are purified without cause,

and (3) that which rejects moral law (*akiriya diṭṭhi*), as in saying there is no such thing as morality and immorality.

Buddhism teaches that evil arises from the wrong grasp of the object on account of ignorance and false views. The term 'sin' which is violation of a command thus finds no place in it; being errors evil can be righted.

Doubt is the nature of shifting the mind from object to object finding out what is true and getting fatigued in the attempt.[1]

Conceit is the nature of comparing oneself against another to one's own advantage. It is like a state of insanity (*ummāda*). It admits of numerous divisions. One is that of the nine kinds, whereby three forms, as superiority (*seyya māna*), equality (*sadisa māna*), and inferiority (*hīna māna*) can arise in respect of each of birth (*jati māna*), virtue (*guna*

[1] Doubt refers to a mental state in respect of eight things, the Buddha, the Dhamma, the Saṅgha, the precepts, the before, the after, the before and the after and the Law of Dependent Origination. It does not mean that the spirit of skepticism is a bad thing. For in the *Suttas* the Buddha says "You have raised a doubt where you should" or "You have raised a doubt where you should not." Dogmatism is not encouraged in Buddhism: for to hold "that one's view alone is right" (*idaṃ saccābhinivesa*) until the person has attained the supramundane states is a tie that binds one to saṃsāra. But doubt which can exist only with restlessness (*uddhacca*) should be resolved in order to let in its opposite nature of confidence, or belief (*saddhā*) which is found in the serene and moral thoughts. This necessity to keep an open mind is stressed in the *Brahmajala Sutta*, where one is advised not to get angry because of adverse criticism. Such an attitude of open-mindedness and of inquiry does not militate against a growing confidence in the teacher or against spiritual advancement. This spirit of inquiry exists right up to enlightenment, when it is present as one of its constituents (*bojjhanga*), the investigation of the reality in phenomena. Confidence follows when doubts are set at rest from experiential knowledge of causation. Blind belief without reason is termed *vissāsa*.

māna) and blessing (*puñña māna*). Its association in pathological states, like schizophrenia, manic depression, paranoia and neurosis and its identification in Buddhism as a form of insanity should help to make people less arrogant.

The remaining specific elements of this group are envy, jealousy, remorse, sloth and torpor. Envy and jealousy refer to being unable to endure the prosperity of others in one, and of concealing one's blessings with a wish to exclude others from such enjoyment in the other. This element of jealousy, an anti-social nature, has been declared by the Buddha to establish tendencies resulting in birth as a hungry spirit (*peta*). It may take different forms according as it is in respect of abodes, benefactors, gains, personal beauty and learning. While jealousy is in respect of personal property, envy is in respect of other's property.

Remorse is the nature of brooding or constantly repenting over evil acts done in the past, or failure to have done good acts in the past. Buddhism thus teaches only to draw the lesson from an evil act and not to brood over evil deeds—a factor of great importance in the treatment of delinquency. To Buddha, to brood on 'sin' is the surest way to hell, for that act will appear at the moment of death and determine his next birth. Envy, jealousy, and remorse are found only in the ill-will rooted thoughts.

Sloth and Torpor are found together when present, and both pertain to the nature of laziness or boredom by which an object is regarded as unwelcome. They are found only on occasion in the induced class of immoral thoughts, i.e., they are not invariably found but always together, whenever present.

D. **The Wholesome Factors** (*Sobhana Cetasika*).[1]

[1] The Wholesomes are sub-divided into four groups (a) The Common to all the Wholesome thoughts, (b) The Abstinences, (c) The Illimitables, and (d) Wisdom.

The last group of mental elements are the twenty-five Wholesome factors. These too are sub-divided so that we have nineteen elements that are common to all the fifty-nine wholesome thoughts, and six which are more specific. Of the latter, three are called the abstinences, two the illimitables and one is the wisdom factor.

(a) **The Wholesome Common Factors**[1] (*Sobhana Sādhāraṇa Cetasika*).

Of those that are common, first, we can look at the elements of confidence, mindfulness and equanimity.

Confidence (*saddā*) is that nature in which there is self-clarification in the spiritual object that should be believed. These objects are: the teacher, the teaching, the order, action (*kamma*), and its fruit (*kamma vipāka*). Confidence has four forms: 1, as *āgama saddhā* it exists in those whose destiny has been declared by a buddha (*niyata vivarana*), 2, as *adhigama saddhā* it is the state of confidence in those who have realised the four noble truths, i.e., in the supramundane thoughts, 3, as *okappana saddhā* it is that which cannot be shaken by anything said to the contrary, 4, as *pasada saddhā* it is the clarity of the thought in that object. This confidence may exist with a weak wisdom when it is called *muddhappasanna saddhā*. Confidence is a state not easy to

[1] (a) **The Wholesome Common elements**. They are confidence (*saddhā*), mindfulness (*sati*), shame of evil (*hiri*), dread of evil (*ottappa*), non attachment (*alobha*), non-ill-will (*adosa*), equianimity (*tatramajjhattatā*), composure of mental factors (*kāyapassaddhi*). composure of cognition (*citta passaddhi*), buoyancy of mental factors (*kāya luhutā*), buoyancy of cognition (*citta lahutā*), pliancy of mental factors (*kāya mudutā*), pliancy of cognition (*citta mudutā*), efficiency of mental factors (*kāya kammaññatā*), efficiency of cognition (*citta kammaññatā*), proficiency of mental factors (*kāya pāguññatā*) proficiency of cognition (*citta pāguññatā*), rectitude of mental factors (*kāya ujjukatā*) and rectitude of cognition (*citta ujjukatā*).

come by. It is an extremely important attainment in begetting higher lives.

Mindfulness (*sati*)[1] serves to keep the true nature or the comprehension of the object before the mind, firmly and steadily. Because of this strong fixation in the object, it is compared to a gatekeeper (*dovārika*) standing at the senses to see that only moral thoughts in the object arise. Mindfulness is thus, like the notion of the censor in western psychology. It has two functions: one of recollection, and the other of valuation. The valuation is as to what is of advantage or disadvantage to know.

The element of equanimity[2] maintains an evenness of the psychic elements in the execution of their respective functions. In addition, there is the element of non-attachment, which restrains one from getting attached to objects and renders it possible to give things away. The two elements of shame of evil and dread of evil have the nature of abhorrence of evil and fearing to do evil, respectively. It should be noted that the sense of 'shame' otherwise 'conscience' is found only among the wholesome thoughts, and should not be identified with the sense of guilt or remorse or 'sin' (*kukkucca*) in the immoral thoughts.

Conscience is therefore, not a mysterious inner voice but an element, which has to be understood and cultivated. It is reckoned as one of the riches of the saints (*ariya dhana*).

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[1] Mindfulness differs from attention, in that in mindfulness, the mind is confronted with the object in a way as not to be deluded in it; whereas in attention the mind is confronted with the object as to cause it to be bound by the fetters (*saṅyojana*).

[2] The virtue of equanimity when practiced and developed as a *brahmavihara* in regarding living beings as the heirs of their own *kamma*, enables one to work for the amelioration of their sufferings, though he may be frightened by the enormity of the problem and frustrated at his powerlessness to secure relief, when he develops love and compassion towards them.

At the same time, the element of non-ill-will, otherwise friendliness or good-will, keeps a person free from resentment and anger.

The rest of these common moral elements are made up of six pairs of elements called composure, buoyancy, pliancy, efficiency, proficiency and rectitude. These do not need further elaboration because the term itself suggests the nature of the elements. For instance, the buoyancy elements have the nature of causing a lightness of mind in moral acts. Likewise, the pliancy elements pertain to removing the hardness of the mind that is caused by conceit and false views.

There is thus a natural tendency for moral acts to be associated with a peace and efficiency of mind, and to secure a relief of tension caused by immoral thoughts with their roots in greed and ill-will, otherwise acquisitive and aggressive tendencies.

(b) **The Abstinence Factors** (*Virati Cetasika*).[1]

There are three specific moral elements, in addition to the wholesome common factors, that arise only in certain classes of wholesome thoughts. They are the moral thoughts of the sense plane and the supramundane thoughts. The three factors are: the moral elements of right speech, right action and right livelihood. They arise, when a person refrains from committing evil acts of speech and evil acts of body, or when he refrains from such acts as a means to a living. Thus, right speech arises in the great moral thoughts when a person knowingly speaks that which is true refraining from speaking that which is false. In the supramundane thoughts, all three are present and effect a purification of the being in respect of such evil acts. Thus negative action, in consciously struggling with evil,

[1] (b) **The Abstinences**. They are right speech (*sammā vācā*), right action (*sammā kammantā*), and right livelihood (*sammā ājiva*). These terms cover both positive and negative action.

assumes validity by the presence of these elements in thoughts. There has to be a high degree of purity of such moral conduct before one can attain the trances. Their perfection is attained in the paths.

(c) **The Illimitable Factors** (*Appamaññā Cetasika*).[1]

Next there are the two illimitable elements of pity and sympathetic joy. Pity denotes the nature of being moved at the sufferings of others, and sympathetic joy the rejoicing in the happiness of others. The term illimitable is used because these elements can be extended to all beings, in pain or joy, without limit. They are found in the great moral and the great inoperative thoughts and in the sublime thoughts. These two elements are not found in supramundane thoughts because the aims there are different. Whereas the supramundane thoughts have as their object *nibbāna*, which functions to destroy immorality, pity and sympathetic joy refer to a living being as the thought object, and function in a different way. An interesting feature about compassion or pity is that it is accompanied by happiness. So that though we may weep at the sufferings of others, we enjoy it.

(d) **The Wisdom Factor** (*Paññā Cetasika*).[2]

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[1] (c) **The Illimitables.** They are pity (*karunā*), and sympathetic joy (*muditā*). Of the four *brahma viharas*: *mettā*, *karunā*, *muditā* and *upekkhā*, all of which are illimitable in that they can be extended to all beings, the two, namely, love and equanimity have already been counted among the wholesome common elements and described there as non-ill-will (*adoso*), and equanimity (*tatramajjhattatā*).

[2] (d) **The Wisdom element** (*Paññā*). Wisdom may range from the ten mentioned in the *dasa vatthuka sammā diṭṭhi sutta* to the insight wisdoms. One of the ways in which the latter are subdivided is as: 1, understanding as causes and effects (*abhiññā*); 2, understanding as states that are moral, immoral superior, or low (*pariñña*); 3, as wisdom that can expel elements (*pahātabbā*); 4, as wisdom that can realise the truth (*saccikātabbā*); 5, as wisdom that can develop moral states (*bhāvetabbā*).

Lastly, there is the important moral element of wisdom which points to the understanding and grasp of phenomena in their real nature such as the four noble truths, and of beings as the products or heirs of their kamma. Wisdom is not identical with intelligence (*buddhi*), though often associated. Thus, we get terms that express this difference, such as *khippābhiññā* and *dandābhiññā* for quick and sluggish super-intellection, and terms as *tikka pañña* and *manda pañña puggalas* for individuals that have wisdom with sharpness and dullness of intelligence. Wisdom may or may not be present in the moral thoughts of the sense plane; but is always present in the thoughts of the form and formless planes and in the supramundane thoughts. The special character of moral thoughts with wisdom is that they have the three motives or roots of non-attachment, non ill-will and non-delusion, which we discussed in an earlier chapter it is essential to one, who wishes to attain the trances and deliverance, that he should have these three motives when engaging in actions; because it is only one who has got a rebirth thought, due to such an act in the past (*tihetuka paṭisandhi*), that can succeed in getting them.

As right views, wisdom is the beginning of the Noble Eightfold Path and as the insight wisdom, it is also the highest stage or end of that Path. This means that, as with moral habits, wisdom has to be cultivated at all times, until it reaches perfection in the paths. The realization or understanding in such thoughts is as real as seeing with one's eyes.

The Buddhist division of wisdom as the realisation (*paṭivedha ñāṇa*) in the paths and the fruitions, and all the other wisdoms as the inference (*anubodha ñāṇa)* may be correlated with that of western philosophers who divide knowledge as the experiential or based on experience, and that based on insight.

The Analysis and the Synthesis of thoughts

The study of *Abhidhamma* requires one to have a more thorough understanding than the mere enumeration of different kinds of mental elements. Therefore, one proceeds from the analysis (*sampayoga naya*) to the synthesis (*saṅgaha naya*) of thoughts. It is the analytical aspect we have examined in this chapter. So that given a particular element we can now show in what thought units it may be found. By the study of the method of synthesis, given a thought we can say what elements are to be found in it. For example, by the method of analysis we say the conceit element is found only in the four thoughts rooted in greed and are free from false views. By the method of synthesis, we say in the spontaneous thoughts it is found with eighteen other mental factors, and in the induced thoughts with twenty. The eighteen are: the seven universals, the six particulars, the four that are common to the immoral class of thoughts, and attachment in the spontaneous thoughts.

In the induced thoughts there may arise, in addition, sloth and torpor, and so make a total of twenty. Likewise, in the synthesis of these thoughts, we can show the composition of each of the eighty-nine thoughts which we examined in an earlier chapter.[1]

A knowledge of the mental elements, and their analysis and synthesis is basic to self-criticism.

[1] Some idea of this was indicated in p. 96 *Fig*. 14.

CHAPTER VII

MATTER (*RŪPA*): THE ANALYSIS

The Definition of Matter

We have up to now described the nature of the mind or the psychic elements considered severally as the cognitive element and the mental factors as well as their combination as the 89 thoughts. Here, we shall describe the third category of elements that constitute the physical body, namely the corporeal elements or matter. Here we are in a better position to test the teachings of the Buddha against that of modern science. Matter in Buddhism is denoted by the term rūpa. It means that in which there is change[1] brought about by hostile conditions such as heat and cold, by hunger and thirst, by bites of insects and reptiles. In its gross forms, matter is subject to impact. The Buddha's avoidance of definitions pertaining to size and weight and giving only the occurrence of change as its characteristic was because he was speaking from factual experience. So He was ahead of those scientists of an earlier age whose definitions of matter have now been shown to be unacceptable. Matter differs from mind in that the physical elements as atoms have form (*sanṭhāna*).

The Size of the Atom

But the physicist's conception of the divisibility of matter into elementary particles and atoms is remarkably paralleled by the Buddhist view of material ultimates (*rūpa dhātus*) and bundles of them (*rūpa kalāpas*).[2] Besides, even the scientist's size of the atom was foreshadowed by the Buddha's estimate of the size of a *rūpa kalāpa*. Let us see

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[1] *Ruppatīti rupaṃ*. Matter is that which has the nature of change.

[2] The term element is used in the sense of fundamental particle for *dhātu*: the term atom for the *rūpa kalāpa*. Concepts such as molecule or elements such as sodium find no equivalent in Buddhism.

how this had been possible. For this the Buddha has set out a table which states that: 36 *paramānu* is 1 *anu*, 36 *anu* is 1 *tajjāri*, 36 *tajjāri* is 1 *ratha renu*, 36 *ratha renu* is 1 *likkhā*, 7 *likkā* is 1 *ukā*, 7 *ukā* is 1 *daññamāsa*, 7 *daññamāsa* is 1 *aṅgula*, or inch (*sammoha vinodanī*). Since there are 49 *rūpa kalāpas* to a *paramānu* (*paramattha dīpanī anutīka*), we get the remarkable approximation to the scientist's calculation of the size of an atom which is 10^{-8} of a cm.[1] the Buddhists' value 10^{-10} cm makes it therefore larger than the atomic nucleus and smaller than the atom.[2]

The Constitution of the Atom[3]

Turning to the analysis of matter or the constitution of the atom, we find that in the category of matter there are twenty-eight kinds of elements, of which four are primary and twenty-four are secondary, i.e., are dependent on the primary ones. It is possible to distinguish between these twenty-four secondary elements on the basis of whether they are directly caused, like the four primary elements or whether they are indirect1y caused. The directly caused elements (*nipphanna rūpa*) which are eighteen have fourteen that are secondary elements. The indirectly caused elements (*anipphanna rūpa*), which are only certain properties of the atoms themselves, are ten. This division has its rationale in the reckoning of all elements (*dhātus*) as functions, and yet admitting the necessity of regarding

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[1] This notation is a convenient shorthand for writing very small or very large numbers. Thus 10^6 means 1 followed by 6 noughts, that is a million; 10^{-6} is the reciprocal of this or one millionth.

[2] The radius of the nucleus is of the order 10^{-3} cm and the radius of the atom is of the order 10^{-8}. These *Fig*ures show only the order of magnitude, but not the exact size; for no such conception of an exact size can strictly be entertained.

[3] In science we analyze matter, first, into a certain number of basic elements (now 103), and these elements in turn into atoms which are made up of the so-called fundamental particles (of which there are 30 or so).

matter substantially as particles. As with the units of thoughts, the atom has functions that are separate from those of the elements constituting it. In this manner, the twenty-eight elements constituting atoms may be divided into eighteen which are particles, and ten which are not.

The Directly Caused Elements (*Nipphanna Rūpa*)

The Primary Elements (*Mahā Bhūta Rūpa*)[1]

The four primary elements are the supporting, the binding, the maturing and the motion elements. They are metaphorically known as the earth, the water, the fire and the wind elements, because these metaphors represent the functions of the four elements. Hence, no one should conclude that there is earth when we say that in water there is the earth element. It merely means that water has the property of hardness. These four elements exist in the atom in a relation of mutual dependence and constitute the

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[1] Hence we could represent the analysis thus:
Matter—>elements—>atoms—>fundamental particles—>energy

Meta-physical Name		Pāli Name	Function	Properties
The Four	Earth	*Paṭhavi*	Supporting	Hardness and Softness
Primary	Water	*Āpo*	Binding	Cohesion and Flowing
Elements	Fire	*Tejo*	Maturative	Hot and Cold
	Wind	*Vāyo*	Motion	Expansion & Contraction

They form the basis structure of all matter and are held together in mutual dependence.

That properties of matter should be reckoned as elements themselves should not be surprising since similar views are now held by scientists. Thus the protons and neutrons that form the mass of the bricks with which the nucleus is built are therefore its solidity; the mesons that form the mortar which holds them are its cohesion; the electrons that circle round the nucleus are motion. The binding energy of the nucleus might be energy or heat.

integral part of all matter. We cannot think of matter, even of a ray of light—light is itself stated to be a form of energy (*tejo*)—that has not all these four natures. In fact, one form of meditation exercise[1] consists in resolving matter in the living being and in the external world into these four primary elements.

The interaction between the atoms leads to differences in their total quantities of the primary elements. Thereby we get certain qualitative or property changes as of state and also other changes such as in color, smell, and sound. Changes in properties can be produced by the energy element being supplied from outside. So that, when the supporting element becomes excessive or abundant, there is hardness, when deficient there is softness. The states of hardness and softness are then a quantitative function of the supporting element. Likewise, cohesion and flowing are the states of the binding element. The energy and motion element too have their extremes in heat and cold in the one, and expansion and contraction, in the other. Accordingly, new atoms resulting from changed conditions may have a greater or lesser quantity of any one of these four primary elements, and so cause changes in the states or mode of being in things as solid, liquid, flame and gas. This is therefore, an anticipation of hegel's proposition that quantitative differences beyond a point lead to qualitative change.

Why old age occurs and why objects can change position

While we are on this subject, there are two significant observations which need mentioning. The first relates to an explanation of the occurrence of youth and old age. This is due to a maturation process[2] from the continuing action of energy on atoms generated at various times. Its action is

[1] *Eka vavaṭṭhāna bhāvanā* or the one analysis meditation.

[2] This natural process occurs in mental faculties too, such as wisdom and confidence and is called the *indriya paripākata*.

compared to dough from which bread is prepared. This when heated, enlarges, hardens, becomes brittle and then turns to ash. So too does this body undergo change as it ages. This change is apart from the continual change in each atom, from the time of its arising to the time of its ceasing.

Secondly, there is the explanation of movement which states that all bodies are continually in a state of motion. Because the Motion element is a part of the structure, atoms which have only a life of very brief duration, are ever springing anew in different places.

The Secondary Elements (*Upddāya Rūpa*)[1]

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[1] The Secondary elements—24.

A. Those that are Directly Conditioned: 14.		Pāḷi Term
(a) Sensitive elements or the Receptors 5	—to Colour	*Cakkhupasāda*
	—to Sound	*Sota pasāda*
	—to Smell	*Ghāna pasāda*
	—to Taste	*Jivhā pasāda*
	—to Touch	*Kāya pasāda*
(b) Stimulating elements or Stimuli 4	—Colour	*Vaṇṇa*
	—Sound	*Sadda*
	—Odour	*Gandha*
	—Taste	*Rasa*
(c) Sex elements 2	—Male	*Pumbhāva*
	—Female	*Itthi bhāva*
(d) Heart or Mind base Element		*Hadaya*
(e) Life element		*Jīvita*
(f) Nutriment element		*Āhāra*

B. Those that are Indirectly Conditioned: 10.

(g) Space element		*Akāsa* or *Pariccheda*

We now come to the twenty-four secondary or derived elements. They are so called because they are dependent on the primary elements. We have already observed that fourteen of them are directly caused, and ten are indirectly caused. The latter are really certain qualities of the directly caused elements or things. The fourteen are made up of the five sensitive elements, the four stimulating elements, the two sex elements, the heart or the mind-base element, the life element and the nutriment element. These it should be remembered are elements within particular units (*rūpa kalāpas*), like the elementary particles within atoms. These fourteen together with the four primary elements are reckoned as the eighteen directly caused elements (*nipphanna rūpa*).

1. The Sensitive or Receptor Elements (*Pasāda Rūpa*)

Let us consider the initial group from among the fourteen directly caused secondary elements. These are the five sensitive elements which are akin to the sense receptors and have been described in Ch. IV in the section on bases. According to the Buddhist view, these cannot be seen with the aid of any physical instrument but only inferred by the untrained mind. They can, however, be seen or cognized by the trained mind in the states of ecstasy or trance. Further, they come into existence on account of kamma or past-

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(h) Intimating elements	—Body	*Kāya Viññatti*
2	—Speech	*Vacī Viññatti*
(i) Alterable elements	—Buoyancy	*Lahutā*
3	—Pliancy	*Mudutā*
	—Efficiency	*Kammaññatā*
	—Initial Genesis	*Upacaya*
(j) Phasic elements	—Subsequent Genesis	*Santati*
4	—Staticity	*Jaratā*
	—Ceasing	*Aniccatā*

action which had desires anticipating sense enjoyment at the time deeds were done in the past.

Each sensitive element exists along with nine other elements as a decad atom (*dasaka*). We thus get the atoms that are called the eye decad, the ear decad and so on.

The sensations (*dvipañca viññāna*) or thoughts of color, sound etc., arise immediately on account of impact of that object on its specific sensitive element[1] but not however before it has succeeded in disturbing the life continuum stream. This impact gives rise to thought processes: first in the avenue of the senses, and then of the mind avenue.[2] This entire system of mental and physical processes by which the object is fully known and reacted to also needs the mind-base element as explained in the simile of the drum.

2. The Stimulating Elements (*Gocara Rūpa*)

The second group of these elements pertains to the external stimuli of color, sound, odor, taste and touch. They are only the principles of which the forms may be many. Thus in the color principle, colors such as blue, red etc., are the forms. Incidentally, we have a physical basis for the view that the eye sees only color, or what some psychologists prefer to call primary qualities, but not the forms of color or the nature of the object of which color is a constituent. Tactile sensations, however, must have tactile stimuli, which for the Buddha, are represented by a triad constituted by the three primary elements of energy, motion and hardness otherwise support. The primary element of cohesion does not take part in touch. These three elements have already been described as the primary elements.

[1] The first two, the eye and the ear, have distant contact (*asampattha rūpa*); the rest have close contact (*sampatta rūpa*).

[2] For the other conditions necessary for the arising of the sensations and other thoughts, see p. 114. If any of these should be lacking, there will be no sensation. If there should be a dysfunction of any of these, the perception will be erroneous.

The objects of tactile sensations, i.e., tactile stimuli are therefore a complex. This is certainly congruent with the physiologists' view that tactile sensations are complex and include the sensations of heat, cold, pressure, vibrations, and pain, whereas seeing, hearing, tasting and smelling are special single sensations. Then correlating the Buddhist view with that of science, one may say that in tactile sensations, what the body immediately experiences are the feelings of pain (*dukkha*) and comfort (*sukha*), along with the sensations, otherwise cognizing or knowing, in the form of heat, cold or pressure and movement.

Another contrast is that whereas the other sensations of seeing, hearing, etc., are accompanied by indifference, tactile sensations are accompanied either by pain or by comfort. Since the seeing and other sensitive atoms are set in the midst of the tactile atoms, or those atoms sensitive to touch (*kāya dasaka*), which are described as being all over the body, with the exception of a few places, we see how it is that if the normal gentle stimulus, of light for example, be increased pain occurs.

3. The Sex Elements (*Bhāva Rūpa*)[1]

Thirdly, there are two sex elements. These elements, pertaining to the male and female, exist as separate atoms and are spread throughout the body.[2] They come into being

[1] The 5 sensitive elements, the 7 stimulating elements, i.e., those of color sound, odor, taste and the 3 made up of hardness, motion and energy and constituting touch are called the gross elements because there is impact between elements. The remaining 16 are called the subtle elements. The latter can only be cognized by the thoughts called mind cognition element, occurring in the process of the mind avenue.

[2] Likewise in physiology we have the teachings as testosterone or male sex hormone and oestrogen or the female sex hormone; ductless glands influencing sexual characteristics; and sex determinants as the genes.

at the moment of conception to determine the sex of the individual in the same way as the genetists' ration of sex chromosomes determines one's sex. Even the possibility of changes in sex is taken care of by Buddhist science, since it is stated that sometimes a particular sex element may cease, and an element of the opposite sex appear. Furthermore, congruence of Buddhist science with genetics is such that in the Buddhist view the existence of some hermaphrodites (*ubhato byañjana*) is a consequence of the mixing of the sex elements in the same person. The arising of these sex elements, which are counted among the atoms born of kamma, to determine the sex, may well explain why only one sperm out of millions succeeds in entering an ovum. In other words the individual, or the kamma bearer, is also one of the conditions of the conception process.

The characteristics of each sex according to the *vibhanga* are grouped thus: the chief marks or the private parts (*linga*), voice and ideas which indicate the sex (*nimitta*), bodily postures in going, sitting, etc. (*kutta*); bodily con*Fig*uration (*akappa*). Thus this biological study is based on criteria such as behavior and ideas besides the bodily organs.

4. The Heart or Mind-base Element (*Hadaya Rūpa*)

Fourthly, we have the mind-base or heart element as a directly caused secondary element. It constitutes what we once referred to as the 'base' for two categories of mental elements, namely the mind element (*mano dhātu*) referring to the thoughts of awareness and reception of the sense object, and the mind cognition element (*mano viññāna dhātu*) referring to all other thoughts except the sense cognitions or the sensations (*viññāna dhātu* or the *dvipañca*

viññāna). It is possible on textual description to locate it within a nerve cell.[1]

5. The Life Element (*Jīvita Rūpa*)

This is an element that gives life to a being in a sense and in a form plane. It is found only within the atom that arises on account of kamma or the moral and immoral acts of the past. The life element has a protective function like the water in the pond which prevents the lotus from withering. In other words, the maintenance of the elements within these units, otherwise atoms born of past-action occurs on account of its presence. It is itself being born anew, i.e., reproduced from moment to moment. Whenever it cannot arise, death follows. This life element in the atoms born of past-action ceases at the same time as the cessation of psychic life in the death thought.

Buddhists thus deny that consciousness, which in the sense and the form planes, arise only in dependence on certain atoms born of past-action, can exist in plants. To maintain that consciousness exists outside the class of living beings we shall have to say that there are these atoms born of past-action in them too.

6. The Nutriment Element (*Āhāra Rūpa*)

The nutriment element (*ojā*) is found in all matter, in living beings as well as the external world, i.e., in every atom born of all four causes, in varying quantities. In the body of the living being it maintains the activity level of the cells. On account of atoms with nutriment coursing along the vessels of the living being meeting with internal atoms, reactions occur to cause atoms born of nutriment. This energizes the cells and dispels the fatigue of the body. In some foods, although it may seem small in quantity, the

[1] Shwe Zang Aung has already suggested this in his '*Introduction to the Compendium of Buddhist Philosophy*' P.T.S. Publication, p. 31. For reasons, see Appendix A. pp. 288–292.

quality of the nutriment is such that it can maintain the body processes for a relatively long period of time. Without additional nutriment from within or without it is not possible to maintain life on earth, over a period of seven days. Hence, a state of cessation of thought (*nirodha samāpatti*) does not last for more than seven days.

The Indirectly Caused Elements (*Anipphanna Rūpa*)

We now come to the class of secondary elements called the indirectly caused elements. These are generally some properties of atoms or units[1] and not of any of its constituents mentioned hitherto.

First, there is the space element whose function is to prevent the fusion of the atoms. Space is a concept (an unreal) that arises when atoms come into existence. Hence it is called the *akasa pannatti*. It is not the ether, nor another 'thing' or particle in the sense in which that word is understood, but the separateness of atoms.

Next, there are the two intimating elements which are responsible for bodily action and speech. They are also not 'things' in the sense of particles. These are only attributes of two kinds of atoms originated in thought. In one, there is the motion element in excess; this causes bodily intimation and so physical action. In the other the hardness element is in excess and this causes verbal intimation, thereby speech. That they are not considered as elements of the directly conditioned class, may be understood, perhaps, as being due

[1] These ten elements are described as characteristics of the above 18 elements; according to some are those of the atom, or functions of functions.

The term *nipphanna* means that which is conditioned, i.e., by past-action, thoughts, etc. *Anipphanna* means that which is not conditioned by these causes. Since all elements are regarded as being conditioned, in order to avoid confusion, we have called the ten 'indirectly caused elements.'

to a structural alteration within the atom. Thus the property of an atom with a structure a b c d may differ from that with a structure a c b d. The reckoning of the intimating elements and the alterable elements, as a distortion or abnormality (*vikāra*) and not as a new element, makes this a possible explanation. It is likely that these elements denote the nerve impulses or their origination because they are said to be different from the usual atoms in that they are seventeen times faster than other physical atoms, i.e., they have a life duration, which is equal to that of a thought unit.

Thirdly, we identify three alterable elements of buoyancy, pliancy, and efficiency, which point to qualities that maintain the equilibrium between elements. For instance, when the body is upset by a disturbance that causes heaviness and lethargy atoms having the above qualities act to maintain the positive state of health, vigor and activity. According to the Buddha, such healthy states of the physical body can be brought about by good thoughts, good food and proper climates.

And lastly, we have what are known as the four phasic elements. These refer to the qualitatively indistinct periods in the life duration of an atom. Though we speak of three phases of the life of a unit as arising, subsisting, and ceasing (*uppāda*, *thiti* and *bhaṅga*), yet matter is involved in a continual process of change. But we arrive at four elements because the phase of arising is reckoned as being of two kinds: the period of initial genesis (*upacaya*), i.e., the genesis of the initial atom of that class and the period of subsequent genesis (*santati*), i.e., the genesis of the subsequent atoms or reproductions of that class. Some commentators suggest that the phase of genesis of the initial atom is not different to that of the atoms in the succeeding moments, but that the distinction serves to emphasize the fact that atoms are constantly arising new and nothing that is material of the previous atom passes into the new atom.

The relative stability of matter, as compared with mind, is evident in that an atom in its three phases lasts the duration of seventeen thought moments or fifty-one lesser thought moments. If we contrast this with the calculation by scientists of the life duration of a generation of particles in terms of micro-seconds, i.e., millionths of a second, we see how the description of the duration of thought was limited to metaphorical descriptions, or to saying that it was not comparable to anything known.

CHAPTER VIII

MATTER: THE SYNTHESIS, NIBBĀNA, CONCEPTS

In the last chapter we described the analysis of matter into its component elements. Here we shall take up the question of the synthesis of the various elements which constitute the atoms (*rūpa kalāpa*s) of a living being. What we seek to determine is how the different elements combine to form the variety of atoms found in a living being.

Any atom is a compound of elements such as those described earlier. The number of elements found in an atom varies from a minimum of eight to a maximum of thirteen. The minimum elements are the four primary elements and the four secondary elements of color, taste, smell, and nutriment. This is called the 'pure-octad' atom. The implication is that there is no unit of matter without the qualities of hardness, cohesion, energy, motion, color, taste, smell, and nutriment. In this, the Buddha has identified what we might term universal material qualities. In atoms having more than the minimum elements, these universal qualities exist as an unisolable radical (*avinibbhoga rūpa*).[1] This is also made use of in assigning names to the atoms. For example, the life element added to the radical refers to the life nonad (*jīvita navaka*)

Yet, the point which needs reiteration is that matter is deeply involved in a continual process of being, with reproduction of atoms of the same kind, or changing into atoms of a different kind. This View of momentariness can perhaps explain the transformation, the creation and the destruction of the various kinds of elementary particles as taught in science. Atoms have only a very brief moment of life, much the same as the life of elementary particles being

[1] There is an atom in which the radical or the *avinibbhoga rūpa* exists by itself. this is called the pure octad (*suddhaṭṭhaka*).

reckoned in microseconds. But relatively, their rate of change is not as fast as the units of mind.[1]

The Four Kinds of Matter

However, the synthesizing of material elements is but an aspect of the study of the causal conditioning or formation of matter. In fact, we have referred to this earlier in our discussions of the four generative forces of matter, namely, past-action, thoughts, energy and nutriment. Another equally important aspect of conditioning is that when the cause ceases the effect, i.e., the atoms born of it, also ceases to spring anew. This rule holds everywhere with this distinction, however, that in the case of atoms born of past-action kamma ceases at birth, but the place of kamma as a genetic force, is taken by the life element (*jīvita rūpa*). Its presence maintains life, which depends on the repeated arising of some vital atoms born of kamma. Its relation to life is one of dominance (*jīvitindriya*) in the capacity of a foster mother, until the occurrence of death. Let us look again at each of these four features briefly, in order to illumine our discussion of the synthesis of the various material elements.

(a) Atoms Born of Past-action (*Kammaja Rūpa Kalāpas*)[2]

[1] A unit of matter or atom lasts seventeen times as long as the unit of thought, except in the case of the intimating elements and the four phasic elements. Five of these have the duration of a unit of thought; in other words, these latter change as fast as the mind. See p.60 *Fig.* 8.

[2]

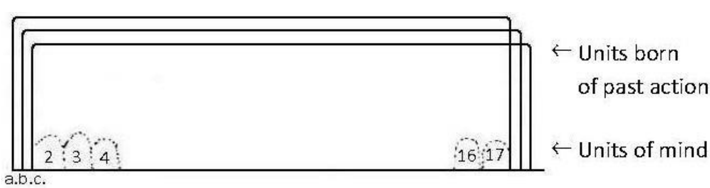


Fig. 19. Diagram to illustrate the genesis of matter born of past-action and its duration of seventeen thought moments.

The atoms generated by past-action, i.e., moral and immoral actions of a past life are, at the moment of conception, three units of matter called the sex, the body and the heart or mind-base decads. The initial or the rebirth thought arises dependent on this heart decad by the mutuality and the dependence relations. The continual arising or self-propagation of the heart decad enables thoughts, except the sensations, to occur.

Following these initial atoms of sex, body and heart there comes into being at intervals of a week, from the eleventh week onwards, the other atoms of the five senses. The respective sensations arise dependent on these atoms or sense bases. The reproductions of the sex decads and the sense bases throughout the body, along with the effects of energy, nutriment and thoughts upon them, give rise to atoms born of all four causes. Their increase by geometrical progression leads to the growth of the foetus.

As the term decad implies, the sex atom—both male and female—is made up of ten elements, i.e., the radical and two other elements (life and sex). Whereas the life element is common to atoms of both sexes, what is variable is the male or female element. Similarly, in the body decad, the two elements, in addition to the radical, are: that receptive

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Three atoms that are born of past-action arise in the genetic phase of the initial or rebirth thought. Thereafter they continue to arise in every phase of the thoughts throughout life. Thus, there are 9 atoms at the time of the ceasing of the rebirth thought. This is only a time relation and not a physical link. Each atom ceases after running its life of 11 thought moments. Thus the initial three atoms at birth would have ceased in the cessant phase of the seventeenth thought moment, i.e., at the sixteenth life continuum thought. Immediately with its ceasing, there arises another one similar to the one that ceased. There are also the daughter atoms split off from the parent atom throughout the period of its staticity. So that there are atoms constantly coming into existence and atoms constantly ceasing.

to touch and the life. In the case of the heart decad we have the life element and the heart or the mind-base element making up the ten elements. Atoms born of past-action[1] are found in every part of the body, except in pus, urine, sweat, snot tears, spittle, and excrement.

(b) Atoms Born of Present Thoughts (*Cittaja Rūpa Kalāpas*)[2]

The second of the causative factors of matter is the present or the living thoughts—not the thoughts of a past. To understand their part in the body-mind mechanism it is necessary to refer again to the Buddhist view of mind and matter.

Mind is conceived of as being different from matter. But at the same time superior to matter because it can control or determine features of the material body. Modern psychosomatic medicine is based on this very same

[1] The atoms born of past-action are: the eye, the ear, the nose, the tongue and the body decads, the female and the male sex decads, the heart decad and the life nonad. In all these units, the elements given rise to by *kamma* alone are: the five sensitive elements, the two sex elements, the heart and the life elements.

[2] All the thoughts of thought processes, except the few stated, generate atoms born of thoughts. These atoms start arising from the genetic phase of the second thought, or the first life continuum thought. Thereafter, they arise in only the genetic phases of only such thoughts that yield this kind of matter.

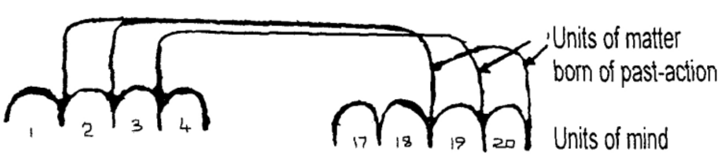


Fig. 20. Diagram illustrating the genesis of matter born of thought.

1 is the rebirth thought and 2 is the first life continuum thought. This matter is generated by all the constituents of the thought unit.

conception of mental states, such as of anxiety, causing physical disorders like gastric ulcers. The Buddha too, teaches the psychosomatist's view that mind is one of the conditions that can generate matter. The mind-influenced atoms, generated in the stage of impulsion of a thought process, are those responsible for the impulses leading to volitional or conscious bodily action and speech. The maintenance of posture (*iriyā patha*), of respiration, the causation of sweat[1] and tears, as well as the alterable elements leading to health, are brought out by atoms born of thoughts, in the impulsion as well as in the remaining periods of mental activity, including life continuum. The only thoughts that cannot generate matter are the sense cognitions and the resultant thoughts of the formless plane.

These atoms[2] come into being at the second thought moment of life, and continue to arise thereafter. They arise in any part of the body, except in urine, pus and excrement. the intimating elements (*viññatti rūpa*) arise at the time of causing bodily action and speech.

In addition to the intimating elements, there are three alterable elements of buoyancy, pliancy, and efficiency that are generated by thoughts; and in this way, thoughts can cause physical health or ill-health.[3] Like the matter

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[1] For the division of the mechanism of sweat secretion into thermal sweating and mental sweating, see McDowell in *Handbook of Physiology and Biochemistry*, John Murray, 39th ed., p. 565.

[2] The atoms that are born of thought are: the pure octad, the body intimating nonad, the verbal intimating decad made up of the octad, sound and verbal intimating elements, the undecad made up of the octad and the three alterable elements and the duodecad made up of the octad, the three alterable and the body intimating elements, the 13 made up of the octad, the three alterable elements, the verbal intimating and sound elements. The elements yielded by thoughts alone are the two intimating elements.

[3] The significance of some of these atoms having the intimating along with the alterable elements and some with only the alterable

generated by past-action, these atoms too, can be seen only by the cultured mind, for among other things, they are subtle and comparatively little in quantity.

(c) Atoms born of Energy (*Utuja Rāpa Kalāpas*)[1]

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elements is that thoughts may cause health in two ways: through the agency of a spreading system and the other wherein there is an immediate effect on the whole body through a signalling system. See also the appendix B. pp. 315–316.

[1] These begin to arise from the time of the static phase of the rebirth thought, and in every phase of thoughts thereafter. There are also secondary streams of atoms during the interaction of the external energy on the energy element within the atoms that have already been generated by the four generating forces. Thus we get atoms born of energy out of atoms born of past-action; out of atoms born of thoughts; out of atoms born of nutriment; and out of atoms born of energy. See p. 73 *Fig*. 13. Secondary and tertiary streams exist in addition to the replacements of the parent atom—when it ceases—by a new one. In this there seems to be some resemblance to the chain reactions in Atomic Physics.

Diagrams to illustrate interaction between elements throughout life.

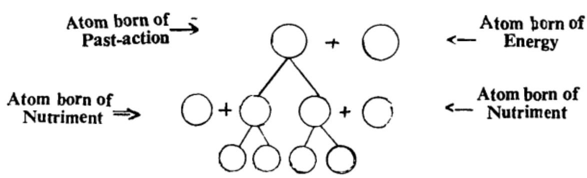


Fig. 21 Matter generated by energy out of an atom born of past action (*kamma paccaya utuja rūpa*)

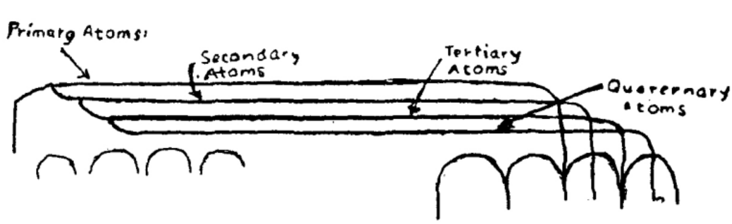


Fig. 22. Diagram to illustrate the birth of generations of atoms.

Thirdly, there is matter generated by energy. All atoms have the energy element (*tejo*). Whereas, in matter outside the bodies of living beings, energy alone is the generating cause, in a living being, however, as the result of the impact of the energy, within or outside the body, on atoms that have been generated by all four causes within the body, atoms of different kinds arise. These atoms are being generated anew. Differences in the generating cause can cause differences[1] in the products.

Atoms having this origin are: the radical-atom, or the pure octad, the atoms with the sound element, and those with the three alterable elements. These begin to arise from the static moment of the rebirth thought.

(d) Atoms born of Nutriment (*Āhāraja Rūpa Kalāpas*)[2]

The *Fig*ures show how an atom born of past-action can yield, by the action of external energy or nutriment, other atoms born of energy or nutriment. This naming teaches us of the interaction between physical elements.

In *Fig*. 21 two atoms are depicted as knocking up against each other to create another. The other shows how those reactions can exist in any of the sixteen moments—the initial little moment that constitutes the life of an atom being exempt.

[1] The atoms that are born of energy are the pure octad; the sound nonad; the undecad made up of the octad and the three alterable elements; the duodecad made up of the octad, the alterable elements, and the sound element.

[2] They begin to arise from the time the nutriment of the mother reaches the foetus. Here too, as with atoms born of energy, the interaction of the external nutriment arriving by way of food, on the internal nutriment within the atoms originated from all four genetic forces yield other secondary atoms that are horn of Nutriment. See p. 73 *Fig*. 13. The Buddha thus upholds the views of Adler and Virchow that the body is a number of interrelated systems enabling the organism to orientate itself to its environment. See *Alfred Adler* by Lewis Way, Pelican p. 56.

Lastly, nutriment is the fourth causal condition of matter. This is none other than the nutriment element (*ojā*) found in all atoms and forming the radical. It generates atoms born of nutriment only when it is within the bodies of living beings. As with atoms born of energy, atoms generated by nutriment also have the power of reproduction, and are stimulated to do so, by the action of the nutriment element, generally from the outside world, in the manner described for the energy element.

The atoms of this category[1] are: the radical-atom, and that containing the three alterable elements. These begin to arise from the time the nutriment of the mother circulates in the foetus. This nutriment is one of the causes of the long life of living beings; on account of it gods and beings at certain periods of the earth's history, are long lived.

The largest amount of matter in a living being is due to energy. Next comes that due to nutriment; but those due to past-action and thoughts are extremely few. Further, the atoms born of the four causes do not exist entirely independent of one another. The absence or lack of one kind affects the other kinds. Thus, if nutriment be absent or insufficient, the atoms born of past-action will cease to arise.

[1] Atoms that are born of nutriment are: the pure octad; the undecad made up of the octad and the three alterable elements. The sound element may be caused by thoughts or by energy. The three alterable elements may be caused by thoughts, energy or nutriment. The octad atoms may be due to any of the four causes except *kamma*.



Fig. 23. Diagram to illustrate the genesis of matter born of nutriment.

This description means that the bodily processes can be understood only on the basis of this four-fold causal conditioning of matter, and the interdependence and interaction of mind and matter. The ethical implications of this inquiry are, nonetheless, clear. The atoms causing a well-being or health of mind and body are due to energy and nutriment as well as thoughts. Hence, the practical value of having wholesome or moral thoughts and not engaging in evil actions.

As Adler emphasised[1] the body is more than a mere collection of cells. It is a series of interrelated organs and systems, serving the needs of an organism, limited in function by his past-actions and his environment. In this way, Buddhism provides a solution to the problem of 'what is life?' that satisfies both the mechanistic and the vitalistic theories, because both have been taken into account without bringing in an unproven God.

The *Nibbāna* Element (*Nibbāna Dhātu*)

So far we have discussed the mental elements, i.e., both the cognitive element and the mental factors, and the physical elements out of the four categories of elements into which all phenomena were divided. The last of these categories of 'reals' is *nibbāna*. The reals are thus of two classes: the mundane, and the supramundane. We shall now briefly discuss nibbāna, the supramundane reality, in so far as it falls within the realm of science rather than of metaphysics. The latter aspect will be considered when dealing with the subject of the philosophy of Buddhism.

Now this element is called *nibbāna*, because it is an extinguishing of the fires or the sufferings of existence; or because it is a release from cravings of every kind,[2]

[1] Lewis Way in *Alfred Adler*, Pelican, p. 56

[2] '*Vānatto nikkhantaṃ nibbānaṃ*'. *Nibbāna* is the nature of being freed from the cravings, otherwise *vāna*. Again '*Santilakkhanaṃ nibbānaṃ'*. *Nibbāna* has tranquility as its characteristic.

otherwise, the thread that sews up one existence with another. It can be directly known only with the wisdom of the path and the fruition thoughts. Although it may be known by an inferential knowledge (*anumāna buddhi*) it cannot be fully comprehended by a mundane wisdom or logic. Hence, it is above logic (*atakkāvacara*).

The *nibbāna* element is a reality that has an absolutely independent existence, in that its characteristics do not depend on anything outside of itself. It is a state of being, because it exists performing a function of its own.

It is radically different to that of the mundane elements. It is therefore neither matter nor mind. Yet, if one has to know a thing by comparison with something already known, it may be said to be more closely akin to mind than to matter.

Some of its Attributes

In respect of the standards for knowledge *nibbāna* is described as having the characteristic of tranquility, the function of non-ceasing, and the manifestation of being without symbol. Being unconditioned, there is no proximate cause.

One of the main characteristics of *nibbāna* is, as we have mentioned previously, that it is uncaused. It is without root or root-cause (*ahetuka*) or any other condition (*appaccaya*). The path to come by this element is by way of the insight meditation that induces the supramundane thoughts. The latter are therefore caused, but *nibbāna*, the object of those thoughts, is uncaused.

Besides this, it has other properties of a positive and negative kind. Not only is its nature stillness, but it is free from all defilements, such as desire, ill-will, and delusion (*rāgakkhaya*, *dosakkhaya*, *mohakkhaya*), by reason of its purity, and of its being a single, uncompounded element. It is more subtle (*sukhuma*) and more edifying (*panīta*) than any other thing. It is supreme in having nothing higher

(*anuttara*). It is good (*subha*) because it is a blessing to beings. It is the end of craving (*taṇhakkhaya*).

It is known as something proved, and hence, this knowledge is called realization (*paṭivedha ñāna*).

It does not have an experiencer, nor is there any association with it of any symbol or sign as is found in mundane things. Unlike other elements, it is not bounded by time, since it has no beginning and no end, for which reason it is permanent or deathless—unlike mundane phenomena, which are constantly breaking up. Its chief characteristic is that it is a state of peace. It is the thought object for the supramundane thoughts of the saints. When it is experienced by the three lower orders of saints, who yet have defilements and by the *arahant* during his life-time it is called the *nibbāna* with the mass of the body (*sopādisesa nibbāna*). At his death, the arahant becomes one with this state, and it is then called the *nibbāna* without the mass of the body (*anupādisesa nibbāna*). In the former, i.e., the living *arahant* there is the mass of the body but there are no defilements. Hence, it is called the defilement freed *nibbāna* (*kilesa parinibbāna*). In the latter both are absent, and it is hence called the *nibbāna* that is mass-freed (*khandha parinibbāna*). Although so divided for various considerations, *nibbāna* is a single element in which there are neither differences nor forms of any kind.[1]

That it can be experienced in life itself as the object of the supramundane thoughts, and also in the state of

[1] It has also been reckoned or divided as of being of three kinds from the manner of arriving at it. When got by reflecting on the body as without self, it is called the deliverance by the notion of emptiness (*suññāta vimokkha*); when got by reflecting on the body as impermanent, it is called the deliverance by the notion of absence of symbol (*animitta vimokkha*); when got by reflecting on the body as 'not-to-be-hankered-after' it is called the deliverance by the notion of nothing-to-hanker-for (*appaṇihita vimokkha*).

cessation of thought (*nirodha samāpatti*), is proof that it is a reality that cannot be put into language. So that the lesser saints (*sekkhas*) are also those who have attained *nibbāna*. Unlike the cognition element and the mental factors, the *nibbāna* element does not take or grasp objects (*anārammaṇa*), nor engages in any creative action having time relations.

Supramundane thoughts (path and fruition) can take only the *nibbāna* element as object. But this *nibbāna* element, however, can become an object for certain other wholesome thoughts of the sense plane too. The individual of the world who can do so should, however, be to a large extent, free from defilements. It is not possible for the immoral thoughts to grasp it, nor can thoughts that have no wisdom. The effect of seeing the sublime *nibbāna* element by the wisdom in the paths is to destroy the defilements at their roots, some completely, and some partially, as if lightning had struck the tree of evil. The powerful function exercised by the supramundane thoughts is on account of the *nibbāna* element which is the thought object. The individual thus purified, evolves into the order of the saints (*ariya*) from that of worldling (*puthujjana*).

Concepts, Ideas (*Paññatti*)

In most of the previous chapters we have considered phenomena of the universe as reals (*paramatthas*), that is, things that exist and perform functions. Thus we have discussed the different kinds of matter and a variety of mental phenomena and *nibbāna*. There still remains a non-real group of phenomena which may be called ideas or imageries of mind. These refer to names, notions, ideas or concepts. These are objects of mind (*dhammārammaṇa*) that arise only in the avenues of the mind. The concept may be of the apparent qualities or attributes implied in the name. It is in this sense that they become illusory phenomena. Yet they are real in a subjectivistic sense, in

that these non-reals too exist as phenomena and act as thought objects.

These non-real phenomena are then of two kinds:[1] called names (*nama paññatti*) or that which makes known, and notions (*attha paññatti*) or that which is made known.

Name (*Nāma Paññatti*)

This denotes the name of a thing or the acquaintance with a thing stated as a symbol or sign or word. Of course, a symbol or sign or word points to a conventional usage and so can be changed at any time. In fact, there is a basic assumption of the semantic school of current English philosophers called the Logical Positivists who go so far as to assert that what exist are only what we call *nāma paññatti*. However, in the Buddhist system, these names are divided into six kinds. We may have the name of a thing suggested by its attributes or accepted by long usage. This naming may be on the basis of a real or non-real or a combination of the real and the non-real.

First, we have names by reals alone, such as feeling, knowing and matter; (*vijjamāna paññatti*) the second, is by names of non-reals alone, such as rock and salt (*avijjamāna paññatti*). Next it is possible to have compound names by combining the real with the non-real (*vijjamānena avijjamāna paññatti*). For example, we have the name 'person with super intellection'. From our analysis we know that there is no such thing as person, that is, it is a non-real. But superintellection is real, in that it is a kind of thought unit. The fourth kind of name is a combination name of a

[1] These two divisions of concepts or ideas have their counterparts in the terms denotation and designation of western philosophy. See an *Introduction to Philosophical Analysis* by John Hospers, Routledge & Kegan Paul, 1956, Ch. 1. This analytical knowledge is carried to the highest level in the analytical knowledge in respect of the grammar of language or the *nirutti patisambhidā* of the *arahant*.

thing that is real with that which is non-real (*avijjamānena vijjamāna paññatti*) such as the 'voice of a woman'. Likewise, there can be a combination of a real with a real (*vijjamānena vijjamāna paññatti*), as with the term eye cognition, for the sensitive element and the thought are both reals. Lastly, there is the combination name of a non-real with a non-real (*avijjamānena avijjamāna paññatti*) as in saying the 'king's son.' For neither of the names, king and son, have any metaphysical reality.

Grammarians, however, assign names on a different basis.[1]

Notion (*Attha Paññatti*).

In the next group of non-real phenomena are the ideas or concepts that are the attributes or the descriptions of things to which names have been assigned. So that whatever the word or sign that is used to denote it, one instantly thinks of it as possessing such and such characteristics.

They are also of several kinds. The first is that derived from a notion of some continuity as distinct things (*santati paññatti*), as in rivers, mountains, etc., but the realities are only the physical elements. The second is the notion that arises from a number of parts and differentiated by the mode of construction (*samūha paññatti*), such as a house or chariot. The third notion is that of species, that are but the five components or the masses of the body (*satta paññatti*). The fourth notion is that of direction or relations (*disā paññatti*), such as east and west, above and below, and of time (*kāla paññatti*) as morning and evening. These are due to movements of planetary bodies. The fifth is the notion or space (*akāsa paññatti*) by such terms as pits and caves, but which are really only the non-contact between atoms. The sixth is the notion of meditation symbols (*nimitta paññatti*)

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[1] *Nāmaṃ, Nāma Kammaṃ, Nāma dheyyaṃ, Nirutthi Byanjanaṃ, Abhilāpa* are other ways in which names are assigned to objects.

such as visualized image or conceptualized image. They are the different stages of a meditation procedure.

Can the Reality in Things (*Paramatthas*) **be known?**

It will be seen by a reference to the order of thought processes in Chapter IX that it is with concepts or names and notions that the mind largely works with. Thus we have processes for grasping the name, and processes for grasping the meaning. These are often built up out of false notions resulting from apparent reality. That applies not only to understanding living beings as entities or egos, but also as to what are conventionally called sensations. The knowledge of things depends on a variety of factors. As physical conditions they are: the nature of the stimulus, the nature of the medium through which the stimulus has to travel, and the state of the recipient organ. As psychic conditions, they are our needs, desires, our training or attitudes and drives and the receptivity of the mind. However, the reals in sense data or the given were sensed in the initial process in the sense avenue. That, however, cannot be known or remembered because the speed or change of thought is so great. Consequently, the senses cannot tell us of the reality in things or things in themselves. Our only instrument for knowing the reals becomes the mind that has been trained by the method of the meditation.

The unknowables of speculative philosophers are for Buddhists only unobservables. It is with the mind proper, i.e., the avenues of the mind that one, therefore, sees both the observables and the unobservables.

Part Two: The Science of the Mind

CHAPTER IX

DYNAMIC PSYCHOLOGY[1]

I. Knowing and Thinking

1. Thought Processes (*Citta Vīthi*)

So far the approach to the study of material and mental phenomena has been a static one, in that the taxonomic interest or the interest in the structure of things was predominant. Yet we have had occasion to consider dynamic questions such as how the body lives, grows and perishes, or how mind acts on the body. Here, we take the dynamic question in greater detail, to describe how the mind works, i.e., thinks, reflects, imagines, dreams, rests, understands others, and laughs, or how the individual gets both the mind and body to do the things it wishes, how the continuity of life and mind is maintained from life to life, and how the mind gets tainted or is purified.

Now, the mind exists as thought process alternating with the thoughts in an occurrence freed from avenue called life continuum, or in the language of William James as an unbroken series of substantive and transitive states. Thought movements then are of three kinds, namely, processes in connection with the five senses or sense avenues, the processes of the mind avenue, and thoughts freed from avenue.[2]

(a) The Thought Process in the Sense Avenues (*Pañcadvārika Citta Vīthi*).

Let us describe a process in the senses, say of the eye,[3] with a bright object and called the process of very great intensity. The luminosity of the object, which distinguishes

[1] Used in the sense of a dynamic conception of mental life acting consciously and subconsciously.

[2] For the process or thoughts freed from avenues, see pp. 206–208.

[3] Depicted in p.102 *Fig*. 16.

limits of vision or visual thresholds in terms of the brightness intensity of objects, is just as important in the theory of perception as in science. So that in *abhidhamma*, sense objects are divided as: objects of very great intensity, of great intensity, of little intensity, and of very little intensity, according to the time required to set up the thought process.[1] During the period of one thought moment, the stream of thoughts called the life continuum is disturbed, and then in the next is broken. The first thought

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[1] The object of very great intensity is that which requires only one moment to set this stream of thoughts in vibration and the thought process ends in registering. The object of great intensity is that which requires two to three moments and the process ends with impulsion. The object of little intensity is that which takes four to nine moments and the process ends in determining. The object of very little intensity takes ten to fifteen moments and is just a mere vibration.

Codes for Figs. 24–27	Rg — Registering thought
Ec — Eye Cognition	Rt — Recipient thought
L — Life Continuum	I — Investigating thought
Lv — Life Continuum Vibration	D — Determining thought
La — Life Continuum Arrest	Im — Impulsion thought
As — Apprehending-at-the-five-Senses thought	
Am — Apprehending-at-the-Mind	

(a) Process with an object, say, a color of very great intensity (*atimahantārammaṇa*).

o o o o o o o o o o o o o o o o o o o o o o o o o o
L L L Lv La As Ec Rt I D Im Im Im Im Im Im Im Rg Rg L L L L L A

(b) Process with an object of little intensity (*parittārammaṇa*).

o o o o o o o o o o o o o o o o o o o o
L L L L L Lv La As E C Rt I D D D L L L A

Fig. 24.—Diagrams to illustrate variations of thought processes from variations in the strength of stimulus.

In (b) it has taken four moments of thought called the *atīta bhavaṅga* before the object has succeeded in setting the life continuum stream in vibration (Lv). Whereas in the former, i.e., (a), it took only one moment. This shows how different gradings of the stimulus produce different reactions.

of the thought process that is now set up, is a thought of the awareness of the objects as if the mind was inquiring, 'what is thus presenting itself'. This is followed by thoughts of passively seeing the object,[1] i.e., its colors but not knowing any more about it, much in the same way as psychologists say, that in infancy the human baby sees things; but knows not their significance. It also proves the psychologist's contention that things as they are can never be known by sense experience alone. The object is then received by the next thought, in the same way as one would receive a visitor.

It is next analyzed by a thought, which looks for marks of differentiation. With that the mind comes to a conclusion regarding the true or false nature of the object. It is perhaps this entire process of discrimination, analyzing, and coming to a conclusion which the psychologists denote by the single term apprehension. The thoughts of this process (*citta vīthi*) are accordingly called the apprehending-at-the-five-senses, the eye cognition, the recipient, the investigating and the determining thoughts[2] respectively.

These thoughts, up to the determining, arise in spite of ourselves and cannot be controlled. The thoughts of seeing, receiving and investigating are the thoughts that are the effects of actions in past lives. This is where the resultant thought or the *kamma* relation is needed in the explanation of perception that arises only to living beings. In the same process there are, however, thoughts over which we have some control and in a sense are free. Because of the power of these latter states they are known as impulsion thoughts

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[1] This is the immediate knowledge by sense perception, or the elementary sensations of western psychology.

[2] The speed or rush of thought is so great that it is only the keen insight of a Buddha that can see and describe these minute divisions of thought. What is seen by even the most advanced yogi in the meditations is only the whole process or this series called the *santati*.

(*javana cittas*).[1] In fact, it is here that a beginning with the *kamma* operation, that is action which leads to good and bad effects in the future, is made. If at the stage of apprehending-at-the-five-senses and determining, the object was apprehended and determined, including the amount of effort and the kind of feeling in the thought, in the correct way, i.e., in accordance with its true nature, such as causing a clarity, a refraining from wrong doing, and a disappointment in the formations, the impulsion thoughts that follow would be moral, and if it was wrongly grasped or determined as causing an attachment, arousing anger, or bewilderment, the thoughts that follow would be immoral.[2]

Finally, there are two resultant thoughts that perform the work of registering. To illustrate this process, there is the analogy of the mango tree, to which we have previously made reference, see Ch. IV, section on Functions.

It is also taught that the object is first sensed, by the thoughts of the particular sense avenue, such as the sense cognitions, the recipient and the investigating thoughts in its natural state, as being disagreeable, agreeable or neither agreeable nor disagreeable, or in a distorted way by the operation of three mental actions, of cognition, noting, or

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[1] These should not be confused with the impulsive or spontaneous thoughts.

[2] It is not only the kinds of feeling in thoughts that are determined, so also are the other constituents of the thoughts influenced: by our innate dispositions; the way we are accustomed to grasp the objects, i.e., along with illusions or without them; our personal wishes. The object sets off subconsciously a trigger action to the mechanisms called the cankers, the latent forces, etc., this shows that the Buddhist teaching is a deterministic process, but it permits the individual to haveba say in the determining. Thus it avoids two extreme positions: 1. if everything was determined then there is no free will and we would be mere machines; 2. if everything was undetermined then moral or spiritual endeavour would be meaningless.

idea formation (*citta vipallāsa, saññā vipallāsa, ditthi vipallāsa*). This distortion occurs to men and also to animals such as dogs and pigs that then see the agreeable in the disagreeable such as carrion or excreta; or the disagreeable in the agreeable such as the *Fig*ure of the Buddha. It does not occur to *arahants* who see things as they really are.

(b) A Thought Process in the Mind Avenue (*Manodvārika Citta Vīthi*).[1]

Turning to the thought process in the mind avenue, we have a slightly different process. The thought object of the process may be the sense object or the mental object. The procedure with the sense object will be described when we come to the order of thought processes in the construction of the 'idea'. When, however, the object is a mental one, the processes are described as being that with the lucid and as that with the obscure object. In such processes in place of the apprehending-at-the-five-senses, there is the apprehending-at-the-mind thought, to cause the awareness of the object. This is followed by seven similar impulsion thoughts and two registering thoughts before the mind lapses into the life continuum state. What is distinctive of this process is that there are no thoughts of sense cognition, receiving, investigating and determining to precede the impulsion thoughts.

The impulsion thoughts of these processes, from about the fourth or fifth in the serial order of processes[2] have

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[1] (a) Process with a lucid object (*vibhūtārammaṇa*).

o o o o o o o o o o o o o o o o o o

L L Lv La Am Im Im Im Im Im Im Im Rg Rg L L L A

(b) Process with the obscure object (*avibhūtārammaṇa*).

o o o o o o o o o o o o o o o o o o o o

L L L L I L L Lv La Am Im Im Im Im Im Im Im L L A

Fig. 25.—Diagrams to illustrate the variations of thought processes with variations in degree of clarity of the mental object.

[2] See order of thought processes p. 192 n. 1

acquired such power as to cause physical and verbal acts, and also to yield effects in the future such as rebirth. The actions having such power are called the action course (*kamma patha*) as distinct from weak actions (*kamma*) in the earlier processes.

(c) A Thought Process in the Mind Avenue for Trance[1] (*Appaṇā Citta Vīthi*)

In the case of the trance process in which the sublime thoughts of the form and the formless planes,[2] or the supramundane thoughts[3] arise, the impulsion stage consists

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[1] *Jhāyati upanijjhāyatiti jhānaṃ*—It is called trance because there is a close inspection of the object. This inspection may be of the form (*arammaṇa upanijjhāya*) or of the characteristics (*lakkhana upaniijhāya*). that of the form causes the achievement of the sublime thought; that of the characteristics causes the supramundane thought.

[2] Thought process in mundane trance (*mahaggata appanā citta vīthi*):

o o o o o o o o o o o o
L L Lv La Am P U A G J L L

Fig. 26.—Diagram to illustrate this thought process.

[3] Thought process in supramundane trance (*lokuttara appanā citta vīthi*)

o o o o oo o o o o o o o o o oo
L L Lv La P U A G M Ph Ph L L L L L

Fig. 27.—Diagram to illustrate this thought process

Codes for *Fig*s. 26 & 27

P — Preparatory (*Parikamma*) thought.
U — Access (*Upacāra*) thought
A — Adaptation (*Anudorna*) thought.
G — Adoption (*Gotrabhū*) thought.
M — Path (*Magga*) thought
Ph — Fruition (*Phala*) thought.
J — Trance (*Jhāna*) thought.

All these thoughts arise in the impulsion stage of the process.

of a forepart, in which there is an attempt made to adjust the individual to a new personality, i.e., either to yogi or to saint (*jhāna lābhi* or *magga lābhi*); and a latter part in which the ecstatic or trance thought itself arises. As mentioned in discussing the mode of being in Chapter IV, there is a transformation now of the life of the being, from being sensuous (*kāmāvacara*) into one of the sublime classes, i.e., of the form and formless planes (*mahaggata*); or into that of the order of saints (*ariya*). The latter may be called a transformation from that of worldling (*puthujjana*) to that of saint.

The sublime thoughts, although having a great deal of wisdom, are not free from the illusions (*vipallāsas*), which are got rid of only in the supramundane thoughts. The wisdom in these latter thoughts spring from a knowledge of characteristics or seeing things as they really are (*yathā bhūta ñāna dassana*).

(d) Cessation of Thought. (*Nirodha Samāpatti*)

At times a non-returner or an *arahant* saint, who has also attained mastery over the trances of the form and formless planes, may wish to enjoy the bliss of *nibbāna*, in that life itself. This he does by causing the flow of thoughts to cease through a combination of the tranquility and the insight meditations. This state is called the cessation of thought (*nirodha samāpatti*). Although thoughts and atoms born of thought cease to arise, the body is not broken up because the atoms born of past-action, energy, and nutriment continue.

The names of preparatory, access, etc. are only certain functional names. The real names are those of either the moral or inoperative thoughts of the sense plane. These arise to carry out such functions.

In performing an act of superintellection one enters the fifth trance of the form plane in the usual way; makes that a stepping stone to the trance with a particular act in mind; and then the act itself is done in a thought process in the avenue of the mind.

2. The Order of Thought Processes in the Construction of the 'Idea'[1]

We may now inquire into the order in which thought processes occur. After grasping an object immediately in the sense avenue, i.e., in the present, there arises the second process in the mind avenue in which the same object is grasped or understood as an object of the past. It is only following several processes of this kind, with the sense object in the present and in the past that the object is acted on further in the avenue of the mind (*suddha manodvāra vīthi*).[2] The object in the mind avenue may be time-bound, i.e., in the present, past or future, or it may be timeless as with concepts and *nibbāna*. This is unlike that in the sense

[1] **Order of Thought Processes:**

i. The process in the avenue of the eye (*cakkhudvāra vīthi*). The object, i.e., the color, say, of a rose is in the present.

ii. The consequent process in the avenue of the mind (*tadātuvattaka manodvāra vīthi*). The object is in the past.

iii. The synthetic process in the avenue of the mind (*samūhaggahana vīthi*) as in (ii). The different parts of the rose are synthesized into the composite picture of the rose.

iv. The process of grasping the meaning (*atthaggahana vīthi*). An idea of the object, i.e., of its attributes is formed.

v. The process of grasping the name (*nāmaggahana vīthi*). A name for this object is understood, i.e., the class name is applied.

vi. The final process of judgment. In this the response such as belief, attraction, repulsion or becoming deluded occurs. Between processes iv. and v. one thinks of the conventional sign, compares with former ideas of the object, discriminates among the common attributes and forms a judgment. In the case of hearing the order of processes iv. and v. are reversed.

[2] The difference between sensation and perception is in western psychology understood as being, like that of a photograph of a scene and that of an artist's painting of it. So that while it is his eye that receives it is the mind that interprets.

avenue in which the object can be only in the present. Then there is, in the case of a visual object, a process for grasping the attributes, and subsequent to that one for grasping the names of the things. It is only after the name has become clear that the final judgment process for causing belief, attraction, repulsion, or delusion, arises as the end result.

It will be seen from the order of the processes that namelessness is compatible with existence as when a person, for the first time, experiences or realizes the nature of an element that he had not known before. It may also appear, where the object was not of great intensity nor of great clarity, as if thoughts can occur without objects, otherwise exist as Imageless thoughts; but it is maintained that no thought ever arises without an object.

A person is generally aware only of the final processes. In the meditation called the 'Establishment of Mindfulness', an attempt is made to understand even these earlier processes

Processes for Groups of Sounds and Colors

In the case of the spoken word where the object is given a name that has two or more syllables, the first two processes operate in respect of each syllable, and are followed by an understanding of the compound name in the synthesizing process, both in the present and in the past, before the 'name' and the 'meaning' grasping processes occur. This same procedure occurs in the case of composite pictures, or tastes or senses or physical contacts. This is similar, in some ways, to the teachings of Gestalt psychology where there is a grasping of wholes, but unlike that, however, the Buddha shows that the mind does not see a whole at once. [1]

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[1](note on following page)

This by no means exhausts all the processes by which a person thinks, for processes, such as that of the conventional sign or symbol (*saṅketa*) by which such an idea is usually signified, and by which he compares the object with the former ideas and comes to a judgment, may intervene between grasping the name and grasping the meaning process. So that in a seemingly simple statement, such as "I see a rose," there are several complicated processes of imagination, memory, association,[1] discrimination and judgment before one comes, to such a conclusion.

It is taught that if a person should hold in his hand different kinds of seeds, although he thinks he sees them all at once, yet it does not so happen. He sees each kind of seed and the hand by separate processes. This penetrating and

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Fig. 28.—Drawing to illustrate the synthetic process

One does not see the drawing as one of lines but as a whole *Fig*ure of a woman holding a bunch of flowers. This is the important hypothesis of the Gestalt School of psychology.

1 In western psychology the method of reviving memories is given as being based on principles of similarity, contrast and contiguity. All these are incorporated in the Buddhist teachings as the laws of the relations, investigating thought and the nature of the noting element (*saññā*). Thus we get here teachings parallel to those of analytic and synthetic knowledge in western psychology.

meticulous analysis of an apparently simple act is something that modern psychology has not done yet.

3. Understanding an Intention from Signs

There is still the problem of coming to recognize a symbol or sign as something special. In other words, how do we know what a gesture or sound is intended to convey? The Buddha says that it requires an understanding of the intention behind the expressed word or sign by two further processes of grasping-the-sign and grasping-the-intention. After the object, i.e., the word or sign has been sensed in the thought processes of the eye, as an object in the present, and thereafter, when it has been grasped as an object of the past, in the avenue of the mind, the sign is next understood by the grasping-the-meaning and thereafter by the grasping-the-name process. Only after this, is the significance or intention behind a sign or word understood from a peculiarity in the movement by the grasping-the-sign process. Finally, we have the grasping-the-intention process by which the wish is understood.

4. Reflections and Imaginings and Creative Ideas

In the matter of reflections, we have to remember that a sense impression or an idea, once formed is never lost. The psychologists say likewise, that there is never complete forgetting, in the sense that something disappears from the mind. Like the psychologist's theory of nerve or memory traces, the buddha classes these sense impressions as things seen, heard, or cogitated (*diṭṭha*, *suta*, *muta*, and *viññāta*). These are called up in the process of remembering. Further, an object that has not been actually sensed may be constructed out of such previously sensed objects. This is often what happens in the formation of complex ideas and hallucinations. In such case, the idea is called an object-associated-with-a-thing-seen, -heard or -cogitated (*diṭṭha sambandha, suta sambandha*, *viññāta sambandha*)

II. OTHER ACTIVITIES OF MIND

1. The "Subconscious"

Besides the teaching as to the order of thought processes, it is also taught that there are three levels of activity to evil, one is the state where ideas arise but are not expressed in physical or verbal action (*pariyuṭṭhāna avasthā*). The second is the state that has gone beyond being contained in the mind only, i.e., has been expressed in motor action (*vīthikkama avasthā*). The third is the hidden or the potential state (*anusaya avasthā*). The latent level of activity may be regarded as the level of the unconscious mind of psychologists.

Of these, the activity that has exceeded the bounds of thought only, i.e., expressed in physical action, along with the last thought process may be taken as conscious activity and all the others preceding that to be subconscious activity. The individual is not aware of what is occurring in the hundreds of processes that occurred before the final one, and hence, the notion of the subconscious is strictly in keeping with the teachings of Buddhism. But the conscious and the unconscious are not in opposition and move together in the same direction.

2. Ideo-Motor Action

The Relations of Thoughts to Present Action.

Still, we may ask how a thought leads to action, or how a thought[1] evokes an action, otherwise referred to as ideo-motor action. We have already described the way in which

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[1] Calvin S. Hall in his '*Primer of Freudian Psychology*,' p. 36, Mentor, says "Transformations of energy (psychic into bodily and vice versa) are continuously taking place. We think (psychic energy) and then we act (muscular energy) or we are stimulated by a pattern of sound waves (mechanical energy) and hear (psychic energy) someone talking. Just how these transformations take place is not known."

matter arises or is conditioned by past action, thoughts, energy and nutriment. There is, we know, one kind of atom which is closely akin to the nerve impulse in that it has the intimating element. These impulses are generated by the thoughts in the impulsion stage of the thought processes of the mind avenue. From being a weak one in that first impulsion thought of that process it develops sufficient force on account of the frequency relation as to be able in the seventh impulsion to carry out the action via the pathway of the body (*kāya dvāra*) or speech (*vacī dvāra*), i.e., the nervous system. Our approach is thus found congruent with that of several current schools of psychology. An intention to carry out an act will be first determined as to the different thoughts, the different avenues or pathways of action (*dvāra*) and the different kinds of such acts as killing, lying, etc. (*kriya vatthu*). The different means (*upakkama*) which may be employed to carry out the act will also require a great many thought processes. But at every stage of the act, each movement is controlled by a thought unit with its volition element (*cetanā*) formulating it in that particular way. Thus an intention or thought to harm an enemy by one of the twelve immoral thoughts may be expressed as an act of body or act of speech. That will be done by the volitions formulating the intimating elements of body or speech in a particular way, and as an eminent writer on the abhidhamma described, it was like the steering wheel in the car or ship in setting the direction. So that unlike the assertion of the Behaviorist school of philosophy, the Buddhist teaching is that thinking precedes speech and voluntary action and is the most important part in the mechanism.

3. Thoughts as Causing Remote Effects and Innate Influences and How do Thoughts Have Remote Effects?

The impulsion thoughts, connected with the thought process of the sense avenues and in those of the early mind avenue processes, have little power to yield future effects. Accordingly, they have only a slight effect during the

existing life period of an individual. It is only those impulsions, which arise in the mind avenue when there has been grasping-the-name and grasping-the-meaning by processes of the mind avenue (*attha sādaka manodvāra vīthi*) that can cause rebirth effects. This power is had on account of the asynchronous *kamma* relation. Such rebirth effects are of a varied nature and may bring about a birth in a particular kind of species, or in a different plane of existence, according to natural law. Their life effects, or the effects in the period after rebirth, are the genesis of the two kinds of the resultant thoughts: those rootless and those with roots, and of atoms born of past action. When effects have been thus produced, the power of an original action is spent. (See section on Death and Rebirth.)

4. Sleep

Sleep is a state of the mind and body induced by the frequent arising of the mental states of sloth and torpor in the induced class of immoral thoughts, or by a state of physical exhaustion of the body. Thus, it is said that on listening to an uninteresting sermon there arises sloth and torpor in the ill-will rooted induced thoughts and one goes to sleep with that. The occurrence of sleep resulting from bodily fatigue is like certain plants that fold their leaves in the evening.

This sleep resulting from bodily weakness is due to the spread of certain atoms born of the thoughts, having sloth and torpor in them. Another cause of sleep is an intoxicated state after a meal (*bhatta sammada*). The latter, is therefore a case of body influencing the mind, and the former, or sleep due to boredom, is one of mind influencing the body. *Arahants*, get sleep only on account of bodily fatigue.

We may then conclude that sleep is a state of mind and body resulting, in the final analysis, from an increased production of certain chemicals. This is not to say that there is no sleep center in the brain.

The question arises, whether, according to the buddhist teaching, there can be centers in the central nervous system, for the control of certain functions. We find that certain elements in some mental and physical units function in a dominant way (*indriya paccaya*), subjecting the remaining elements to its influence so as to secure its goal. We see that certain thought processes such as the understanding of a name or a meaning also work to the attainment of a goal. It is also taught that certain states of mind can function in the manner of an overall dominance (*adhipati paccaya*). So that it is mind more often than matter which is the dominant system. When it is said that there are some physical atoms, such as those of the nervous system, that become specialized in their relation to thoughts, it is not in conflict with buddhism which otherwise speaks of such relationships.[1]

5. Dreams

While we are considering the dynamics of mind, it is pertinent to consider the buddhist conception of dreams. Dreams are not had in times of the life continuum state of deep sleep, nor in times of wakefulness, but at times of light sleep (*kapi nidda*). Like the freudians, we say dreams are had by all, even by saints. The only exceptions are the highest of them, the *arahants*.

Now dreams arise, in the avenues of the mind and not in the senses. The thought object at these times of dreaming, are the six kinds of objects, i.e., the five sense objects and the mental object. These mental objects may be of the lucid or of the obscure kind. We contend that dreams are due to four causes,[2] namely

[1] Interactionism pp. 225–226.

[2] *Tañcā panetaṃ supinaṃ catūhi kāraṇehi passati, dhātukkhobhatovā anubhūta pubbatovā devato pasanhāratova pubbanimittatovāti—pārājikā aṭṭhakathā*

1. Disturbance of the elements, i.e., mental or physical illness,
2. Reflections on what has been thought of earlier,
3. Influence of spirits and of gods, and lastly,
4. Portents.

The first two are distortions of that which is true, i.e., of an existent state of affairs. The next two may or may not represent reality. Hence, we must beware of accepting phenomena such as visions, flashes of lights, automatic writings and hypnotic suggestions, as necessarily true.

Dream thoughts too, may be moral, immoral or of a neutral kind. But since the volition element in these thoughts is weak, they have not the power to cause rebirth effects. They can, however, supplement the moral and immoral effects of other actions, during the life period of a living being.

6. Laughter

It is an expression of a thought with happiness that may vary from a smile to emission of sounds, shaking of the body and tearing. There are thirteen thoughts that can do this. They are: the four immoral, the four great moral, the four great inoperative, and the laughter-genesis or aesthetic-pleasure thoughts. Worldlings and the lesser saints laugh with the above immoral and moral thoughts. The Buddha and the arahants laugh only with the inoperative and laughter-genesis thoughts. In respect of the expression of such thoughts,[1] Buddhas have only the smile, saints have the refined form of laughter, and the coarse laugh is indulged in only by worldlings.

The causes of laughter or the answer to why people laugh are to be found in the motives behind the thoughts

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[1] Laughter is of six forms: *sita, hasita, vihasita, upahasita, apahasita, atihasita*. The laughter-genesis thought causes only the first two forms.

that lead to such laughter. They may be moral or immoral. The cause of the smile of the Buddha and the *arahant* is the aesthetic one, that may, however, be passed over by the worldling as trifling. Thus he may smile on seeing a delightful spot for meditation, on getting a delicious article of food when he thinks it fit for distribution among other monks, and so on in respect of the five senses.

III. KAMMA, DEATH, AND REBIRTH

1. Volitional Causation (Kamma)

The occurrences of events that are the effects of past-action (*kamma*) have been stated on so many occasions that it may be useful to treat this subject in a separate section.

We shall also see how *kamma* partly accounts for individual differences among people and also how it limits their achievements.

Kamma, which means action, has as its essential element, volition (*cetanā cetasika*). It is an element that is found in every thought unit and not only in moral and immoral thoughts. Now actions may be fruitful or ineffective. The fruitful actions or those that have the potential to bring about future effects are: the ten moral actions, and the ten immoral actions. It is the volitions in them we refer to, when we speak of *kamma*. The ineffective actions are those of the *arahants*, and those for the maintenance of the bodily postures, for the causation of glandular secretions, respiration, and those actions of apprehending, cognizing, receiving, investigating and registering performed by the resultant and the inoperative thoughts.

Kamma has four names on account of its association as an operatival force in the fulfilment of effects. The first is the immediate effect occurring in the three periods of the volition element: of arising, staticity, and cessation, and is called *cetanā samaṅgitā*. It is like the implantation of a

seed. The second is called the *kamma samaṅgitā*, and is the force after the implantation, by which remote effects are brought out at different times. The third name is *upaṭṭhāna samaṅgitā* and is that which causes the occurrence of the death sign at the time of death. The fourth is the *vipāka samaṅgitā* or that at which there arise a mass of elements, at different times in one's life as the fruit of past action.

The Immediate and Remote Effects of Volition

The events caused by the volitions of those thoughts are either simultaneous or successive, being those due to the synchronous (*sahajāta*) or the asynchronous (*nānā khaṇika*) kamma relation respectively. By the synchronous or simultaneous kamma relation, volition does the co-ordinating and the directing of all the other elements in that thought unit in their respective functions. It also influences the generation of the atoms born of thought (*cittaja rūpa*) that cause physical and vocal movement of a voluntary or involuntary kind and the flow of glandular secretions. The asynchronous or successive kamma relation causes the events occurring later, as at the time of rebirth and even during life, that are: 1. of a material kind called the atoms born of past-action (*kammaja rūpa*); 2. the resultant thoughts (*vipāka citta*); 3. the innate influences conferring various powers and abilities; 4. certain manifestations at the time of death.

The Remote Effects of Volition

1. The Material Effects—The physical elements that are generated include the decads of seeing, hearing, etc., i.e., the bases on which the sense cognitions arise; the heart or the mind-base element dependent on which the remaining thoughts arise; the sex and the life elements.

2. The Conscious Effects—The psychic elements that are generated, are the resultant thoughts performing the functions of receiving, investigating, registering and of impulsion (only in the case of the supramundane thoughts);

and, in the case of the thoughts that are avenue-freed, the functions of rebirth, life continuum, and death.

3. The Innate Influences—The place of birth, the physical strength or weakness, the beauty of form, wealth, health, fame are also determined by the quality and the intensity of the volitions of these past acts. By quality is meant the class to which a thought belongs, as an immoral thought, or as a moral thought of the sense, form or formless plane, as stated below. Thus an act of the sense plane has the power to cause rebirth in the sense plane. By intensity is meant whether it is superior, inferior, or middling. *Kamma* also accounts for the innate temperamental dispositions and intellectual gifts, and which help the physical and psychic elements above mentioned to arise. In this way, the differences and variations between one species and another, between men and women, and also amongst themselves, in respect of their bodies and behavior, are accounted for.[1] Buddhists therefore, while agreeing with the views that heredity and environment determine behavior, go beyond that and add another factor, namely, past volitions or *kamma*.

This law of past-action accounts for the occurrence of those primary desires, needs and impulses which are grouped as the instinctive life, in a life in which the body grows, thoughts arise, and actions are done, in accordance with the laws of thought, of heredity, of energy, and of phenomenology. Thus a bird's ability to fly is called a skill resulting from past-action (*kamma vipāka iddhi*). Other abilities and behavior can also be the result of past practices and are called the *vasana*. Thus we have the story of an *arahant* monk who, while travelling with an attendant, had to cross a small stream. While the attendant waded across the monk jumped it. This happened, in spite of the monk's

[1] *Kammassakā sabbe sattā, kamma dāyādā, kamma yoni, kamma bandhu, kamma paṭisaraṇā, yaṃ kammaṃ karissanti kalyānaṃ va pāpakām vā tassa dāyādā bhavissanti'*

disciplined life of decorous behavior, because in his past life he had been a monkey.

This means that Buddhism which offers an explanation of Instincts has a place in it for the Purposive or the Hormic School of psychology.

4. Phenomena at Death—The acts, moral and immoral, bring about the manifestations occurring near the time of death and called the death signs stated below. The death sign becomes the thought object for the thoughts that are avenue-freed.

Why Remote Effects are caused only by some thoughts

Actions become fruitful on account of the volition mental factor whose nature is formation or preparation[1] of the effect (*āyūhana*). But it can do so only when other conditions such as moral or immoral nature are present. The volition in moral thoughts and actions are conditioned by the right grasp of the object, and by ideas or motives of liberality, friendliness, etc.

Now the question arises why the impulsion thoughts of arahants, which are inoperative thoughts, do not yield effects. The volition in immoral thoughts and actions are conditioned by the wrong grasp of the object and by ideas of self, acquisitiveness, and ill-will. Here ignorance is present in a co-existent or combined form in the thought itself. Though ignorance is not present in the moral thought itself, it is nevertheless, present in the being in a potential, otherwise latent, form. In the case of *arahants* although their thoughts have roots, yet there is a total absence of ignorance, and hence, of either moral or immoral nature. Their actions, therefore, do not yield future effects. Thoughts of cognizing, receiving investigating, and registering are resultant thoughts, and so do not yield further effects.

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[1] See *Kamma* Relation, p. 223.

Measure or Value Character of Acts

Acts are of various degrees, and are hence, called inferior (*hīna*), middling (*majjhima*), and superior (*paṇīta*). The criteria by which an act is so considered are: 1. the intensity of whichever element of willingness, cognition, effort, or judgment assumed this role, at the time of doing the act as the dominant influence (*adhipati dhamma*), 2. the quality of the particular class of thought as being of the sense or form plane, 3. the nature of the thoughts that preceded and those that succeeded the carrying out of the act, i.e., whether these thoughts were of the same kind, or superior or inferior to the thoughts at the time of the action.

Kinds of Kamma

Acts are considered from different aspects, and accordingly, bear different names. In essence, they are the volition element in the moral and immoral thoughts. These kinds of *kamma*[1] are:

(*a*) in respect of genesis or becoming: 1. genetic or agonistic (*janaka*), 2. accentuating or synergistic (*upatthambhaka*), 3. weakening or antagonistic (*upapīḷaka*), 4. destructive (*upaghātaka*).

(*b*) in respect of weightiness or gravity: 1. weighty (*garuka*), 2. habitual (*āciṇna*), 3. terminal (*āsanna*), 4. residual (*katattā*).

(*c*) in respect of time of appearance of effect: 1. effect-in-very-life (*diṭṭha dhamma vedanīya*), 2. effect-in-next-life (*upapajja vedanīya*), 3. effect-in-some-life (*aparā pariya vedaniya*), 4. inoperative (*ahosi*).

(*d*) in respect of place of rebirth: 1. immoral (*akusala*), 2. the moral of the sense plane (*kāmā vacara kusala*), 3. the

[1] The temptation to describe these has to be resisted, because this Chapter has already become too long, and so the reader is referred to other works on this subject of *kamma*.

moral of the form plane (*rūpāvacara kusala*), 4. the moral of the formless plane (*arūpāvacara kusala*).

From the above list one can say that *kamma* lays down the essential foundation for future life, while environment can alter the structure of the building for better or for worse in conformity with the natural laws.[1] If this is to be taken together with the view that *kamma* is also a determinant of parents and plane of existence, that brings Buddhism in line with the findings of psychologists who have investigated problems like the influence of heredity on artistic, musical, athletic, mathematical and literary talent, and on intelligence, and have come to the conclusion that heredity and environment both influence such traits.

2. Death (*Maraṇa*), **Rebirth** (*Punaruppatti*) **and Process freed from Avenue** (*Dvāra Vimutta*, *Vīthimutta Citta*)

While we have accounted for many kinds of mental activities, we have not made particular mention of the thoughts occurring in the period of death in one life and the rebirth in the next; and also those between thought processes, known as life continuum. These are of a special nature and are called the process or the thoughts freed-from-avenue.

When death is about to occur, and when volitional control by the mind is weak, a powerful event in the ebbing life or of an earlier life thrusts itself forward. It is then suitably recalled in one of the six avenues: as the immoral or moral thought of the act (*kamma*); or as a symbol of that act (*kamma nimitta*) such as the gift in the act of giving, or sword in the act of murder; or as some sign of the coming existence such as fires or music and called the sign of destiny (*gati nimitta*). They are known as the death signs. One of these three classes of signs becomes the thought

[1] It also shows why theories of expiation, atonements and salvation are unnecessary in this teaching in which the course of events is explained and one is asked to work his own way out.

object of the terminal thought process, (*maraṇāsanna javana vīthi*),[1] which may be of the sense avenue or of the mind avenue of the ebbing life.

Thereafter, there arises the death thought to terminate that life. Since, however, the thirst for living and for sense enjoyment exists as a force in the individual, and is also present in that terminal thought process, the stream of thoughts cannot be made to cease immediately, i.e., following the death thought[2]. Instead, there arises, in a life suited to the mental development of the individual and the act that is causing the rebirth, a speck of matter formed of a triad of atoms born of past-action called the sex, body, and mind-base atoms, together with a thought unit called the rebirth thought that arises dependent on that mind-base atom. The thought object of that rebirth thought is the death sign mentioned earlier. This thought is a conscious effect or resultant of the past act which is now causing rebirth. The thought object to the thoughts causing rebirth, also becomes thought object to the life continuum and death thoughts. This occurrence is now not through any of the avenues. Hence, these thoughts are called the avenue-freed.

To the being that is departing this life as a human being, if the act that is being manifested or projected as the death sign is an immoral act, then his rebirth will be in the lower worlds. If it is a moral act of the sense plane then it will be in one of the seven heavens (*kāma sugati*). If it is a moral act of the form plane, it will be in one of the worlds of the form plane (*rūpa loka*). If it is a moral act of the formless plane, the rebirth will be in one of the four formless worlds. (*arūpa loka*)

Following this rebirth thought, there arises a series of life continuum thoughts. These latter also arise, during life,

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[1] The terminal process is peculiar in that it has five impulsion thoughts to the usual seven. See p. 102 *Fig*. 16 and p. 104 *Fig*. 17.

[2] There is no interval between the death and rebirth thoughts.

in between two thought processes.[1] It is these that serve to maintain the continuity of the personality or the life, when the mind is not consciously acting towards a thought object. Although these thoughts are called rebirth, life continuum and death, yet it is the same thought, i.e., one of the nineteen resultant thoughts,[2] but performing different functions on the different occasions. Thus, it causes the rebirth, or the linking of the past life with the present life, at the conception moment, life continuity between two thought processes, and cessation of life at death. The thought object of that thought unit on each of these occasions is the death sign that occurred in the previous life, as stated above.

IV. THE CONTROL OF EVIL

1. Control by Expulsion (*Pahāna Vinaya*)

There are two kinds of motives to action: evil motives and moral motives. At one time, a person acts from motives of greed, or ill-will, and at another time, the same person acts from motives of generosity and goodwill. In other words, he has thoughts of immorality and morality respectively. He is a mixture of good and evil. At any given

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[1] See p. 101 *Fig*. 15 and p. 105 *Fig*. 18.

[2] The nineteen resultant thoughts perform these functions of rebirth, life continuum, and death are:

1. the four resultant thoughts of the formless plane to *arūpa brahmas.*
2. the five resultant thoughts of the form plane to *rūpa brahmas*.
3. the eight great resultant thoughts to the fortunate beings of the sense plane.
4. investigation thought accompanied by indifference that is a rootless moral resultant to unfortunates among the fortunate beings of the sense plane.
5. the investigating thought that is an immoral resultant to all the beings of the lower worlds.

time it has to be one or the other, not both. He represses one to establish the other. How then can he establish himself on the good path permanently?

If repression be taken to mean a method of working by extinguishing a memory, then such is not the meaning here. By repression is meant the arousing of a state that is the opposite nature to that which is repressed. The moral thought represses the immoral thought at the time of its arising; and vice versa; but it is like darkness that is dispelled by a light only to return when the light is removed. This expulsion, for the time being only, is called the repression (*tadanga pahāna*)[1]

As that person continues to practice moral habits and engages in the meditations his evil thoughts get less and less by the subconscious incubation and maturation of the moral elements and their roots. When his avenues of physical and verbal actions, i.e., his deeds and words have become pure (*sīla visuddhi*) there comes a time when he sets the sign (*patibhāga nimitta*) during the meditation.[2] Then, he keeps back powerfully the defilements, chief of which are called the hindrances. Before long he gets a trance thought in the stage of impulsion called a moral thought of the form plane. This is called the cleansing or the purification of thoughts (*citta visuddhi*).[3] He is now a different personality, or yogi (*jhāna lābhi*), far removed from evil. This is the expulsion that is maintained and is called suppression (*vikkhambhana pahāna*).

He can, however, lose this state and revert to his former self, but not if he has turned his thoughts in another direction, i.e., to regain insight on the trances he has achieved. If he is successful, he gets again, in the impulsion stage of a thought process, the supramundane path thought.

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[1] Compare this with episodic conflict in Western psychology.

[2] See description of Meditation.

[3] See pp. 24–25.

He experiences four such occasions in which he gets four path thoughts. On each occasion, his vision is purified of some of the hallucinations or the false notions of reality, otherwise, illusions.[1] With that, evil is destroyed, lot by lot at their very roots, so that there is no possibility of their ever arising again in *samsāra*. This complete expulsion[2] is destruction (*samuccheda pahāna*). This is purification of views (*diṭṭhi visuddhi*) because he gets rid of false views such as of a 'soul.' his personality is once again changed and he is now called the ariyan or saint (*magga lābhi*). He is now firmly on the road to the cessation of the sufferings of existence.

2. Control by Discipline (*Saṅvara Vinaya*)

There is another method by which control or discipline may be viewed. This disciplinary method is of five kinds: as discipline by moral action (*sīla saṅvara*), by mindfulness (*sati saṅvara*), by wisdom (*ñāna saṅvara*), by patience (*khanti saṅvara*), by effort (*viriya saṅvara*). The discipline by moral action is accomplished by carrying out the precepts and the *patimokkha* (*vāritta sīla*) and also by the observance of the conventions of society (*cāritta sīla*). The discipline by mindfulness means to be on guard so that the mind should not grasp the object and react to it in a wrong way. The third means is the powerful discipline exercised by the wisdom in the path thoughts and is got by the destruction of cravings and false views. The fourth is patience, and is got by developing the power to endure and tolerate heat and cold, words of abuse, etc. The fifth is effort. He makes strong effort to suppress the evils that are existent in him as well as the evils that may not have yet arisen.

[1] See Insight Meditations.

[2] See section on Purification of the mind pp. 26–28.

Control at Different Levels of Consciousness

In dealing with the subconscious, it is said that there are three levels of action and that the remedies for the evils are control by moral action. The moral actions may be a positive one of doing the ten kinds of moral acts, and its numerous subdivisions, or the negative one of abstaining from doing evil. The controls exercised are:

1. At the conscious level of motor action (*vīthikkama*), by the observance of the five precepts, the eight precepts, the ten precepts and the patimokkha. This is the end in view of the *Vinaya Piṭaka*.

2. At the subconscious level (*pariyuṭṭhāna*), by the meditations. This is the aim of the *Sutta Piṭaka*.

3. At the unconscious or latent level (anusaya), by the attempts to understand, to get at the root of things. This is got by the purification of views in the insight meditation. This is the aim of the *Abhidhamma Piṭaka*.

All three divisions of the Buddhist Canon have therefore each its sphere of usefulness.

This will accord with the psychological view that partial suppression of instincts can lead to conflicts, and sometimes to perversions of a serious nature. Attempts to correct error at the latent level should, therefore, commend itself to enlightened opinion. The study of *abhidhamma*, whose aim is fundamental suppression, should on that account, merit the earnest study by psychiatrists.

In this way, the practical advantages of the study of Buddhism should be the overcoming of the harmful and pathological responses of evil thoughts, by an understanding of their nature. This is different to the overcoming of emotional responses as taught in western psychology.

It will thus be seen that the buddha offers an explanation of the occurrence of events such as thinking, memory, judgment, dreams, actions and deliverance without bringing

in the notion of an agent or self[1] and yet according to a certain order. When we trace the history of western philosophy we see that Bishop Berkeley first destroyed the notion of material substance but retained spiritual substance. Hume[2] applied the same kind of criticism and found in the idea of the self a baseless and unnecessary addition to observed facts. He, however, went on further to a conclusion greatly regretted by that philosopher himself, namely the absence of order. The Buddha has, therefore, provided the necessary reconciliation desired by Hume.

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[1] This explanation is based on the teaching of Momentariness and is peculiar to Buddhism. It asserts that there is no identity between the past life of a individual and his present life; and, even for that matter, in the different moments of the present life. But there is a continuity of process or the stress of successive thoughts. A person that is reborn is in one sense the same person, in another sense, different. (*Na ca so nacaññо*). This is like a thing and its reflection in a mirror or between plant and its parent tree. The Present life is not only in direct continuity with the past (*santati*) but is also a new life conditioned by the past according to his deeds. This makes moral law just and fair and reasonable and removes all arbitrariness about it.

[2] In *Treatise of Human Nature*.

CHAPTER X

CAUSAL RELATIONS (*PACCAYAS*)[1]

JUST as the endeavor of science is to establish cause-effect relationships,[2] so also is the Buddhist teaching based on such understanding. Phenomena or events are not the products of a single cause but of a multiplicity of causes or conditions. In fact western thought was a victim of the fallacy of single causation, until the advent of J. S. Mill, who propounded his now classical and much criticized conception of the plurality of causes. It is indeed a tragic circumstance in the history of knowledge that this profound contribution of the Buddha lay hidden from the thinkers of the world. Consistent with the deterministic position, the Buddha also rejected the animistic view that an agent is part of the cause-effect relation.[3] Like the scientists, the Buddha too maintains that the cause-effect relation is a natural occurrence. That is, there is no intention on the part of the cause to bring out the effect. It is something which occurs in the nature of things and is there for us to directly observe. It is just this understanding called the law of dependent

[1] In Buddhism, cause (*paccaya*) is anything which assists in the bringing out, i.e., the origination of a mental or physical event or of its continuation or maintenance. The manner in which this power operates divides a cause into 24 kinds or causal relations or causal influences.

[2] In western philosophy, in defining cause, a dispute arises: is it a necessary connection between the cause and the effect, or a constant conjunction of events, i.e., a regular repetition of a sequence of events. It is agreed that it is not to be thought of as a kind of glue that pastes events. (See *Introduction to Philosophical Analysis* by John Hospers, p. 223).

[3] The principle of causality is stated thus: The Wise Seer, the Blessed One, pronounced this round of defilements, causes, and effects—this universal chain without beginning round the triple plane—to be the law. "That whatever doth befall, must happen through a cause." See also p. 216 n. 2.

origination, or the *paticca samuppada*, that denies both god and soul, that helped the Buddha to win enlightenment.

Two Ways of Dealing with Causal Relations.

Now, there are two ways in which this knowledge can be gained. In the first, called the method of the law of dependent origination, it is to set down a series of cause-effect relationships as links in mutual dependence so as to form a ring. This is called the wheel of life. Here we see the cyclic operation, of causes conditioning effects, which now become causes to yet other effects. This we have already identified as expressing the idea of a causal web or chain. This web or cycle has existed in the past as it exists in the present, and will exist in the future too. This law accounts for the occurrence of the mind and the body, or the elements that constitute them, in a bond of mutual interaction and dependence. It establishes connections between the past and the present, and between the present and the future, further enabling us to see the beginninglessness of life, not for man alone, but for all beings. It also shows a way to get out of the process of conditioning of life.

According to this explanation of life as a wheel or cycle, however primitive that life, such as that of an amoeba may appear to be, it cannot be traced to a first beginning because it contains within it the possibilities of progress and of regress. The question of a cause to a first event or a God does not arise because a first event does not exist. This is, however, not a statement in respect of species, which is the vehicle of that life, but of the individual or the personality.

In respect of the second method called the method of the *Paṭṭhāna* an effect is not produced by a single cause but by a number of causes.[1] Thus, to prepare a rice meal, the pot, the cook, the fireplace and the water are all necessary. But if the farmer did not produce the paddy, all the other factors

[1] This is a Many-to-One Relation.

would be of no avail. The method of the *Paticca Samuppdda* lies in pointing to the primary or the basic cause such as the paddy. On the other hand the method of the *Paṭṭhāna* is to examine all the relevant, conditions or relationships, or the precise circumstances[1] due to which, out of the paddy, the rice meal is produced. The *Paticca Samuppada* method may be compared to a study of conditioning at the atomic level of things; the *Paṭṭhāna* method as a study at the sub-atomic level, such as the causal influences of the mental and the physical elements on one another, and also in respect of time as simultaneous, as preceding and as succeeding.

The Wheel of Life or the Law of Dependent Origination (*Paṭicca Samuppāda*)

We now turn to the first method or the law of dependent origination. A series of primary cause-effect relations in causation are set out in this law. At the same time, it also states that when the cause ceases, the effect also ceases.[2] There are eleven sets[3] of such cause-effect links in this

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[1] Professor Bohm in *Causality and Chance in Modern Physics*, p. 10 states that in order to deal with the problems raised by our inability to know all of the significant causal factors there has evolved a distinction between immediate causes and conditions (or background causes.) For example, one might say that fertile soil plus plenty of rainfall provide the general conditions (or background) needed for the growth of good crops. But the immediate cause would be the planting of the appropriate seeds. The distinction between immediate causes and conditions, is, however, an abstraction useful for analyses but not strictly correct.

[2] Thus it is also stated that the complete cessation of ignorance leads to the cessation of the formations; the complete cessation of formations leads to the cessation of re-birth thought and so on to the last link. Also compare this with the law of disuse in learning.

[3] (1) *avijjā paccayā saṅkhārā*, (2) *saṅkhāra paccayā vinñãnaṃ* (3) *vinñãna paccayā nāma rūpaṃ*, (4) *nāma rūpa paccayā salāyatanaṃ*, (5) *salāyatana paccayā phasso*, (6) *phassa paccayā vedanā*, (7) *vedanā paccayā tanhā*, (8) *tanhā paccaya upodānaṃ*,

circle or wheel of life. [1] It should be understood, in respect of each link, that the effect would not appear if the cause did not exist.[2] In describing them, the constituents of each

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(9) *upadāna paccayā bhavo*, (10) *bhava paccayā jāti*, (11) *jāti paccayā jarāmaraṇaṃ soka parideva dukkha domanassa*.

[1]

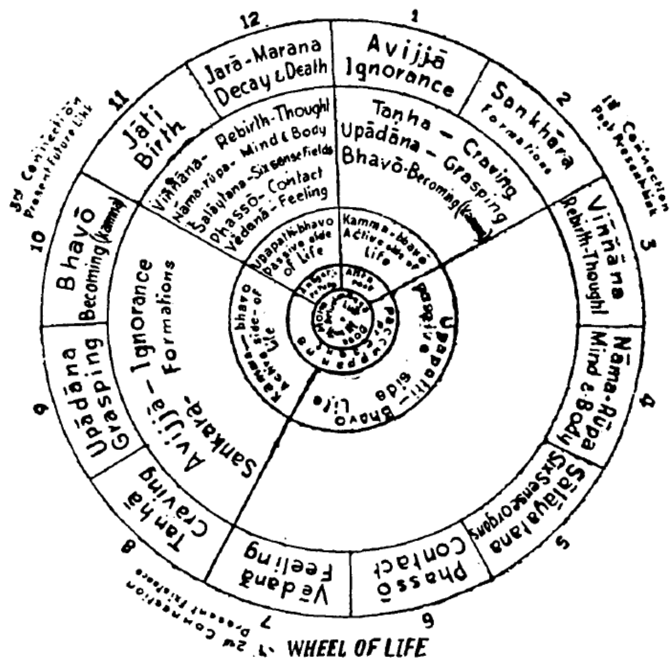


Fig. 29. Diagram to illustrate the process of conditioning of life in respect of existence in the past, the present, and the future.

This system consists of twelve factors, each of which is the cause of the event that is next. It differs from a chain reflex in that the causal relationship is in respect of importance but not necessarily in respect of time: for some events are of simultaneous origin; that event or effect becomes the cause to the event stated next.

[2] In this system it should not be thought that there is cause in the effect nor effect in the cause. There is no endeavor or intention for

link and how the effect is brought out will be briefly sketched. It is well to remember that events are not determined uniquely but by the operation of a number of conditions.

The first link states: dependent on ignorance, arise the formations or volitional activities. Ignorance is essentially that of the four noble truths. Formations refer to activities of the mind, particularly by volition (*cetanā*) that directs the elements within the mental unit to the doing of moral and immoral actions. It is because of ignorance, or absence of understanding of the four noble truths, that people foolishly engage in both moral and immoral actions. For example, it is lack of compassion for another being in suffering—for all life is suffering—that leads one to kill it. Here ignorance is present in the thought itself, and actively conditions immoral actions. Likewise, people do moral acts because they have in themselves, the potentiality for desires to arise, otherwise latent desires for material gains and living in a future life, but which, however, is essentially impermanent and unsatisfactory. Here too, ignorance conditions those desires. Hence, ignorance conditions immoral action in an associated or combined way. It conditions moral action in a latent way.

The second link states: dependent on formations arises the rebirth (resultant) thought, desires for living and sense enjoyments are ever in our thoughts and it is because of these that we go forward into the future. Accordingly, at the time of death, the *kamma* or the volitions in the thoughts with which a past action was done, together with the force of the desires in the thoughts of the terminal thought process, cause the occurrence of a triad of physical atoms and a resultant thought called the rebirth thought, with

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the cause to bring out an effect. Though one factor differs entirely from the other, yet the cause is in close connection with its effects like the seed and the tree. "*Ekattha naya, nānattha naya, avyāpāra naya, evaṃ dhammatā naya*".

which to start a new life. The forces that operate at this moment are: ignorance (*avijjā*), craving (*tanhā*), and formations (*saṅkhāra*). Ignorance blinds the individual to the disadvantages of the consequences of that action; craving inclines him to the new life; and formations throw him forward to it. This is the second link.

The third link states: dependent on the rebirth thought, arise mind and body. The body from being a mere speck grows. This rebirth thought is of great significance, for if it did not arise, the initial triad of atoms, and all the corporeal atoms that arose subsequently, together with the thoughts comprising the stream of life, would not have arisen.

This is not, as in the previous link, a linking up of events of two existences, but a relation in the rebirth thought itself. The cognition element, the mental factors and the corporeal atoms, have this dependent relation at the very moment of successful gestation.

The fourth link states: dependent on the mind-body arise the six fields. On this growing body, the sense organs and thoughts, arise at different times from the eleventh week onwards. If the earlier arisen body was not there, the sense organs and thoughts would not appear.

The fifth link states: dependent on the six fields arises contact. It is only because of the six senses, that thinking, or thoughts having emotions and desires in them, become possible. Unless there was some form of contact between the mind and its object, or the thought and the thought object, there could be neither thinking nor emotion. This contact occupies a very central position in the Buddhist teaching of how life comes to be.

The sixth link states: dependent on contact arises feeling, because feelings would not arise in the absence of contact.

The seventh link states: dependent on feelings arises craving. Feelings are of the agreeable, disagreeable or neutral kind. Because of these feelings the being wishes to

experience happiness again and again—thus arise cravings or desires. It is, however, not only pleasant feelings that conditions craving, but also unpleasant ones—for, because of pain, people look forward to pleasure.

The importance of emotion, in motivation and conditioning is such that in the reckoning of the living being as the five-fold mass, one part is the mass of feelings (*vedanā khandha*).

The eighth link states: dependent on craving arises grasping. When cravings arise repeatedly, there arises a strong urge called grasping. Thus a person can dismiss the first desires in lovely things or persons, but not if they have become strong by repetition.

The ninth link states: dependent on grasping arises becoming.[1] This grasping is greatly assisted by the false notion of a self. So the individual strives to procure for himself the objects of the grasping. In other words, these are activities, otherwise active becoming. This is the Buddhist interpretation of Hobbes' teaching that desires are a movement on the mind.

The tenth link states: dependent on becoming arises birth.[2] This 'becoming' in a living being means that we take to activities with acquisitive intentions, i.e., the tendency to originate or to be. The means of acquiring may be fair or foul. The fair means are the practice of virtues, and the foul means are the practice of evils. Because of such desireful and acquisitive and aggressive activities, otherwise fetters, life cannot be ended but must take on a new form in a

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[1] Becoming (*bhava*) is two-fold: as the action becoming (*kamma bhava*) or the doing or the active side of the existence: and as the rebirth becoming (*upapatti bhava*) or the passive side of existence or the begetting of the mass or the mode of being.

[2] This is the occurrence of the rebirth thought, mind and body, the six fields, contact, feeling.

rebirth in a fortunate or unfortunate place, or the passive becoming.

The eleventh link in this chain states: dependent on birth arise: decay, death, pain, unhappiness, sorrow, lamentation and despair. The nature of things that are born, in other words conditioned, is that death must inevitably follow. But the person who lacks this true understanding of conditioned things, weeps, grieves, laments and despairs at times of such loss or change.

Such events as the death of near ones, old age, etc., are, except in the *arahants*, a cause for further and increasing delusion and ignorance. Consequently he takes to activities to procure the lost things. He thus starts again on this cyclic process, or the first link of this wheel of life.[1] And so it goes on, until he learns the way to get out of the clutches of this cyclic process of conditioning[2].

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[1] There is an analogy that explains this conditioning of the events that are the major factors in this life process. A blind man (ignorance) walking along a road, on account of failure to see, struck his foot against a stone (formation), and he fell (rebirth thought). Then a swelling arose (mind and matter) and on it appeared six blisters (the six senses.) Consequent on this boil with the six blisters knocking against objects (contact) he felt much pain (feeling.) To ease this pain he desired to apply medicines (craving) he brought stronger and improper medicines (grasping) and applied them (becoming.) This made the boil bigger (birth) and in due course it burst (decay and death.)

[2] This wheel of life can be viewed in other ways: thus we have two roots (*mūla*) and three rounds (*vaṭṭa*). The roots are craving and ignorance. The rounds are defilements (greed, conceit etc.), actions (moral and immoral thoughts) and effects (life in various spheres and some thoughts and matter). Defilements cause actions; which cause effects; and which in turn cause defilements. Thus the being goes on from life to life.

The Method of the *Paṭṭhāna*

Or The Twenty-four Relations or Influences (*Paccayas*)[1]

Let us now take the second one or the *paṭṭhāna* method. Here we identify twenty-four relationships that can exist between a cause and its effect. These are the specific conditions or influences or helps (*upakāraka dhamma*) under which the general principle of association or connection operates.

1. The Root Relation is like the existence of a tree depending on its roots. In this way, certain mental elements bear this causal mode or basic motive, to the other elements in that unit of thought, be it moral or immoral, in its genesis. There are, however, some thoughts (the rootless) that do not have this relation.

2. The Object Relation is the mode by which the object causes the genesis of thought. Its power may be such as to cause thoughts of that object to arise again and again in the future. It may exert its power in a very dominant way (*arammaṇādhipati*) or as a sufficing condition (*arammaṇupanissaya*). This power may be due to its own intensity or the strength of the subjective states it induces.

3. The Dominance Relation is a causal mode like the overall dominance of a king over his subjects as well as his ministers. In a thought unit one out of the psychic elements of willingness, knowing or cognition, effort and judgment can assume such a position over the rest, during the stage of impulsion. Thus, though feelings, without doubt, are a dominant influence, as in the theory of Hedonism. Yet it is

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[1] These 24 relations are called: (1) *hetu paccayā*, (2) *ārammaṇa p.*, (3) *adhipati p.*, (4) *anantara p.*, (5) *samanantara p.*, (6) *sahajāta p.*, (7) *aññamañña p.*, (8) *nissaya p.*, (9) *upanissaya p.*, (10) *purejāta p.*, (11) *pacchājāta p.*, (12) *āsevana p.*, (13) *kamma p.*, (14) *vipāka p.*, (15) *āhāra p.*, (16) *indriya p.*, (17) *jhāna p.,* (18) *magga p.*, (19) *sampayutta p.*, (20) *vippayutta p.*, (21) *atthi p.*, (22) *natthi p.*, (23) *vigata p.*, and (24) *avigata p.*

not feeling alone that can determine a man’s actions; effort and duty too can be conditioned to fulfil such a role.

Here too it will be seen that Buddhism distinguishes between willingness or interest (a particular) and the universal conative tendency or volition.

4. The Proximity, and **5. the Contiguity Relations** are the conditioning on account of recentness of events. This is like the coronation of the king’s son being assisted by the king’s death. The ceasing of one unit is a condition to the arising of the succeeding one.

6. The Co-nascence Relation states that the coming into existence of one thing means the existence of other things that are found to exist together.

7. The Reciprocal Relation is the causal mode of mutual help.

8. The Dependence, and **9. the Sufficing or the Excessively Dependent Relations** are like that of a painting depending on the canvas. This sufficing relation is of three kinds: of object (*ārammaṇa upanissaya*), of immediacy (*anantara upanissaya*) and of natural state (*pakatu upanissaya*). The first arises when the object is taken as being of great value. The second is the influence of thoughts that have ceased on account of their nearness. The third is the influence of the natural state of things, mental and physical. Such are passions, delusions, wishes, benevolent states, pains, pleasures, and food. Two other examples are where confidence conditions subsequent moral thoughts (*pakatūpanissaya*) and where thoughts exist greatly dependent on the thought object (*ārammaṇa upanissaya*).

10. The Antecedence Relation is the help of the earlier arisen event in the genesis of the following event. Thus the sensations arise on account of the sense object that is already existing.

11. The Consequence Relation is the help of the subsequent event to the existing thing as in the maintenance of the earlier arisen body by feeding it, or when information

of an approaching doom influences his conduct, or again the non-arising of atoms born of Kamma when death is about to occur.

12. The Frequency Relation is the help of repetition as in memorizing and study. Psychologists place great emphasis on what the Buddha calls the frequency relation.[1] the Behaviorists too, claim that which occurs repeatedly and frequently becomes linked or associated, so that the evocation of one automatically leads to the other.

13. The *Kamma* Relation is the mode of active conditioning by which volition (*cetanā*) brings out effects. This causal mode is of two kinds: as the synchronous or the conascent (*sahajāta*) *kamma* relation in which the volition simultaneously with its arising, formulates its own thoughts, words and actions—see ideo-motor action; and as the asynchronous or successive (*nānā khaṇika*) *kamma* relation whereby the seeds of future effects are planted at various earlier times of action as to influence rebirth and, thereafter, other effects in that life. This is the law of action and reaction in respect of volitions of present thoughts and of past thoughts.

14. The Effect Relation is the effortless, peaceful and passive mode of production of the effect, like flowers appearing on plants. Thus in the resultant thought, cognition and mental factors in that thought bear this relation.

15 The Food Relation[2] is that mode by which material food becomes a condition to the maintenance of the body. There are certain mental elements too which act in a similar capacity to the mind.

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[1] In western psychology vividness, recentness, frequency or habit and conditional congruity are the reasons why one representation rather than another should be awakened in recall.

[2] This is so fundamental that the Buddha poses the question "*Eka nāma kiṃ*" What is one? and gives the answer: "*Sabbe sattā ahāraṭṭhitikā.*" "All living beings exist on account of food." *Khuddaka Nikāya*.

16. The Faculty Relation helps in the manner of control or sectional dominance without suppressing the power of others as in the dominance relation.

17. The Trance Relation is the mode of bringing out trance thoughts, and matter born of such thoughts on account of being mentally absorbed in conceptual objects. This is the equivalent of what is called insight in western psychology.

18. The Path Relation is the causal mode in the manner of a path. This path may be to a fortunate or to an unfortunate life or to *nibbāna*.

19. The Association Relation is the causal mode of a help in being associated together.

20. The Dissociation Relation is the help of not mixing together, or of being separate. Thus mind and matter are distinct events and this nature of not mixing assists in their genesis.[1]

21. The Presence Relation is a mode of causal genesis by which some events occur only in the presence of certain other phenomena, like the notion of a catalyst.

22. The Absence Relation is a causal mode, in which events occur only in the absence of certain phenomena, in contrast to the presence relation. Thus the place of one can be occupied by another only in its absence.

23. The Abeyance Relation, and **24. the Continuance Relation** are similar to the absence and the presence relations respectively.

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[1] William James writing on *Discrimination in Psychology*, *Briefer Course* states, "experience is trained both by association and dissociation and psychology must be writ both in synthetic and in analytic terms (p. 244). Another implication of the Buddhist teaching is the denial of Epiphenomenalism, that mental processes are a by-product of brain or physical activity.

Interactionism

In this manner in the production of an effect by a primary cause as indicated in the eleven links of the wheel of life, there may be four, five, six or more of these relations or causal modes that operate. Thus it is stated that: 1. mind is causally related to mind by six relations. 2. mind to mind and matter by five relations. 3. mind to matter by one relation. 4. matter to mind by one relation. 5. concepts, mind, and matter to mind by two relations. 6. mind and matter to mind and matter by nine relations. By such study we can state that matter or the physical body can causally influence the mind by way of the object; the sufficing condition such as food, climates; the overall dominance; the co-nascence; the mutuality; the food; the faculty; the dissociation; and the presence relations. The mind influences the body by way of the root; the trance; the path; the *kamma*; the consequence; the overall dominance; the conascence; the mutuality; the dependence; the food; the dissociation; and the presence relations. Thus the Buddhist position on the subject of interactionism is quite clear. By such relations the mind and body are related to and interact on one another in various ways, while remaining two distinct parallel systems, both in health and in disease.

Further, each of these systems is to be understood taking both the mechanistic and the purposive views of activity. [1] Thus in a thought process, say of understanding a name (*nāmaggahana vīthi*), the units arise to achieve a common goal. In the field of matter, in a seeing atom (*cakkhu dasaka*), there is a dominance of the eye element (*cakkhu*

[1] Aldous Huxley in "*Perennial philosophy*" p 34–36 mentions 4 ways by which the mind acts on the body: 1. subconsciously through the unbelievably subtle psychological intelligence also spoken of as entelechy as in breathing and assimilation, 2. consciously by acts of will, 3. subconsciously by emotional states as anxiety causing nervous indigestion and even dental caries, and 4. consciously and subconsciously certain supernormal manifestations such as faith healing and levitation.

pasāda), and the functions of all the other elements in that atom are subservient or co-operative to the function of seeing. This dominance is called the indriya paccaya. The working of each unit is mechanistic in that it is not the work of an agent but the result of conditions.

With this chapter we conclude the section on Buddhist science. If we take a survey of what has been said, we have studied things at their atomic and their sub-atomic levels, as the units and the elements and then presented a picture of a living being, as an organism built up, out of stimuli produced by the body or by the environment, by a process of conditioning and a number of responses called a succession of cause-effects (*hetu phala paramparā*), or causal nexus, united with a past and going on to the future —or as in Watson's words "an assembled organic machine ready to run." But unlike in the mechanistic school, there are two systems, the mental and the physical, each one being dependent upon and influencing the other.

Today a devastating materialism exists in most parts of the globe. It results in a negation of spiritual values by concentrating on the sensory. Without denying to automatism, its validity and, in fact, putting it on a yet finer basis, Buddhism brings back those who have strayed by showing through its philosophy a different conclusion and a happier destiny than nihilism. A living being, suffering from life to life by this conditioning process need only go on until he finds absolute happiness and immortality[1] in the *nibbāna dhātu*, the unconditioned element.

In the next section, on Buddhist philosophy, we shall see the implications of these scientific teachings on the goal of activity, otherwise, deliverance.

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[1] The infinity of time in both directions (before and after) offers no difficulties to the understanding. If scientific evidence is in favor of an infinite time, coming from infinity, going to an infinity, logic has no objection. Hans Reichenbach in *The Rise of Scientific Philosophy*, University of California Press, pp. 207–208.

PART THREE

THE MORAL PHILOSOPHY[1]

CHAPTER XI

THE NATURE OF LIFE AND THE CAUSE OF LIFE

AT the commencement of these chapters, it was pointed out that *Abhidhamma* contains both a metaphysical and a scientific system. So far we have shown that *Abhidhamma* as a science, attempts to analyze phenomena into their ultimates, and by classification and by determining the laws and principles on which they function, to study their nature. The Buddhist metaphysics with which we shall deal in the next three chapters rests on an understanding of this scientific system.

We shall now select a few principles on which we base our philosophy. They are: the impermanence of the elements, their conditionality, their momentariness and their egolessness.

The Impermanence of the Elements

In the foregoing chapters we analyzed phenomena and showed that they were various kinds of activity or functions, small and big enmeshed like the small and the large wheels of a watch. These activities were all of a conditioned nature, because they arise determinate upon specific conditions or influences (*paccayas*). It is these conditions we inquired into, in our discussions of the different kinds of causal relations. There is one striking feature that is common to all conditioned phenomena. This is their impermanence or their constantly changing nature.

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[1] "The same overvaluation of culture, the same belief that art and literature are ends in themselves, and can flourish in isolation from a reasonable and realistic philosophy of life have even invaded the schools and colleges." Aldous Huxley in *Perennial philosophy*, Chatto and Windus, London, p. 127.

The Conditionality of the Elements

All these elements exist on account of conditions. These we condensed, in respect of matter, to past-action, thoughts, energy and nutriment, and in respect of mind, to the twenty-four relations. We found that some events in our life could be determined by controlling the conditions; and some events could not be determined because we could not control the conditions.

The Doctrine of Momentariness

Further, we know that elements and their combinations, as units of mind and matter, exist in the form of series. Each unit comes into existence, lasts a brief moment, and then disappears, only to be immediately followed by another unit. This is the impermanent nature (*anicca*) of any determinate thing, whether it is found in the sense plane within a celestial being, or in the form and formless planes within a *brahma*. So it is that happiness changes to unhappiness, health changes to ill-health, and life ends in death. Stated as a law, it means that which is born must change and die, even where that life, as distinct from the momentary existence of the units, lasts millions of years as in the formless plane. Incidentally, if there was not such a nature then changes in thoughts and in action, that enable thinking and acting would be impossible. Hence change is fundamental to all life.

The Egolessness in the Elements

Now, besides the elements that are thus grouped into the five aggregates, there is nothing else in the form of a self or soul or anything of a permanent nature, that serves to bind the elements singly, or as between their units. Nor is there a master or owner, that can subjugate the units, in oneself or in others to its own will, or do things as it pleases him. Thus there is no power that can stop or delay a mental or a physical unit from proceeding to decay, and end in death. To reiterate a point made earlier, these elements are only

forces or energies (*kriyā*, *mattā*, *dhamma*, *nissatva*, *nijjīva*) that carry out various functions, without the purpose or intention of an agent to do so. They are only responses or reactions to stimuli. The vital point, however, is that merely carrying out a function should not be confused with the presence of an agent or a permanent self. Let us make this position a little clearer by an analogy. There are within our bodies, millions of little particles called the white corpuscles that move about. If foreign bodies such as bacteria should enter into the blood, these white corpuscles, if observed under a microscope, may be seen to engulf and to digest the bacteria, and to extrude the remaining portion of the undigested matter. If these functions were understood to be evidence of a soul, then there should be millions of little souls in us. Apart from the impossibility of this, we should also be postulating the existence of little souls within the soul, stipulated by some as the divine element within us.

The Buddhist position is exactly what the scientist has proved by experiment, in which the picture of a simple object was rapidly replaced in the field of vision by one in the same place, but differing from the other in colour, size and shape. The perception or experience was either a single object changing in some property, or of its replacement by another object with different properties.[1] Likewise, do we get the notion of a single individual or soul, persisting throughout life, or the notion that it is another individual that is reborn as a spirit or a god at the end of that life. The truth is that a living being is a changing dynamic process, appearing or manifesting itself in some form at one time and in some other form at another time. This is expressed very briefly in saying, "*Naca so naca añño*"—"Not the same nor yet another." Mind and matter are only manifestations of forces, existing as separate units of momentary duration, and not in unbroken continuity with the unit that went before or the unit that comes after. Since the unit ceases

[1] *General and Social Psychology* by R. H. Thouless, p. 136.

completely, i.e., without residue, nothing passes from one to the other.

When dealing with the subject of illusions we stated that there were four false notions that all worldlings have. They were: permanence, wholesomeness, happiness, and of self in mundane things. Our acceptance of phenomena as correct because everybody else agrees is without justification.

The removal, primarily, of the hallucination or false notion of this self will enable one to see more easily that the existence of the body-mind or the five-fold aggregate of elements is ill.

The Truths

The genius of the Buddha lay in his ability to integrate a large aggregate of facts in metaphysical inquiry, under four major propositions or Truths. This ability to discern the most general laws parsimoniously is also the hallmark of great scientists, like Einstein, Darwin, and Freud. But unlike these scientists, the Buddha was able to propound his metaphysical laws in such a way that they could be comprehended at different levels of intellectual ability. A proper understanding or the correct knowledge of these fundamental truths then becomes a prerequisite to understanding the processes of the universe and the part of one's own motivational forces in them. Only then can one wander calm and unruffled through the vicissitudes and storms of life and the welter of delusion, anxiety, prejudice and other forms of maladjustments around events. From such knowledge of the realities or truths of life, he proceeds to make the best use of this hard won life that may not again come his way for millions of years to come.

But what are these four major propositions or the Four Noble Truths, as they are known? They are the Noble Truths of Suffering, Cause of Suffering, Freedom from Suffering and Way to the Cessation of Suffering. More simply we may speak of them as the truths of conditioning

and non-conditioning, of movement and stasis, or of taking up and laying down.

Why So Called

These truths are called the noble truths (*ariya saccas*) because they have been propounded by the noble ones (*ariyas*) such as the Buddha, or because they represent the highest form of truth. Truth in Buddhism is deemed to be of different kinds. Thus we have conventional truth (*pariyāya sacca*) when we speak of man, woman, river, mountain, but in respect of essentials such as elements and units (*paramatthas*), they are not true and are hence called (*nippariyāya sacca*). These also can become untrue and yield to the highest or the noble truths (*ariya sacca*). For example, the moral thought or the moral resultant thought is a mental unit and exists, but in respect of a higher generalization or metaphysics, it is untrue, for it belongs to the category of things that are ill on account of being conditioned and so being liable to change.

These Noble Truths have three features common to them; they are true in that they always occur as stated (*tatha*); they are not false in that nothing contrary to this statement ever occurs (*avitatha*); there is never a happening in any way other than as stated as the four natures (*anaññata*).

The Reasons for the order

The Truth of Suffering is stated first because of its grossness, and universality and is the easiest to realize. As the next, He has stated the cause of that, like some great healer who diagnoses the illness and investigates its origin. Then having caused a dissatisfaction in the nature of life, in what beings had hitherto taken delight, the Buddha proceeds to assuage their disappointment by showing a state of freedom from suffering. In the Fourth Truth, He prescribes the remedy necessary to achieve that happy state.

THE FIRST NOBLE TRUTH (*Dukkha Ariya Sacca*)

Let us examine each of these Noble Truths in turn. First there is the Noble Truth of Suffering (*Dukkha Ariya Sacca*). In translation, as is often the case, it is difficult to express the meaning of *dukkha* in a single word.[1] Though it is frequently translated as suffering, it is more appropriate to render it as ill or unsatisfactoriness. The term is a compound of *du*, meaning disgraceful or lowly, and *kha*, which means unsubstantial or empty.

The existence of these five-fold aggregates is disgraceful because it assists the occurrence of many harmful events. It is unsubstantial because of absence of permanence, wholesomeness, happiness and of self.

The Buddhist takes the existence of happiness in the world as a fact, but is unsatisfied with it, in that it is of a fleeting or transitory nature. So the contention is that something which is transitory cannot truly represent a state of happiness. But oppressions and pains, of a physical and mental kind, loom so large in our everyday life that it seems

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[1] See p. 236. There are many kinds of ills: *dukkha dukkha*, *viparināma dukkha*, *saṅkhāra dukkha*, *paticchannā dukkha*, *appaṭicchanna dukkha*, *pariyāya dukkha*, *nippariyāya dukkha*. *Dukkha dukkha* refers to mental and physical pain. *Viparināma dukkha* is the transitoriness of feelings of ease and happiness or the momentariness of the feeling elements in that they last only a brief moment. *Saṅkhāra dukkha* is the oppression by the aggregates constituting the body on account of birth and death. Visible pains from assaults and from ulcers are *appaṭicchanna dukkha*. Such aches and pains and mental sufferings are the unobservable sufferings (*paṭicchana dukkha*).

Ills can also be divided as *nippariyāya dukkha* or the first mentioned kind of ill and the *pariyāya dukkha* for all the rest. The latter such as birth are a condition to the arising of suffering and it is on that account, ill. Unsatisfactoriness or ill, therefore, seems the best word to express all these connotations of the term *dukkha*.

legitimate to use the term suffering instead of ill, provided, however, that its limitations are recognized. This Truth is therefore, that the existence of the five-fold aggregates, or the mind and body of a living being, is ill.

One way to understand the nature of existence is to analyze the living being into its five component parts and see their real nature.[1] The other way is to see life as a aggregate of events of which the very large majority, is bound up with suffering. To clarify this first truth we can examine life in each of these ways.

Life as the Aggregate of Conditioned Elements is Ill

Ordinarily we believe in and work with ideas of wholes such as a living being, an object or picture. Whereas the reality is that things consist of parts. Likewise, when we dissect the life of a living being, of whatever kind, as animal, man or god, we see that it is made up of a mental part consisting of thoughts, emotions, memories and called mind (*nāma*), and of a physical part or the physical body (*rūpa*). By categorizing the elements, the Buddha regarded the being as a composite of five parts, each of which is constituted by an element or group of elements, namely, the aggregate of cognitions, the aggregate of feelings, the aggregate of perceptions, the aggregate of formations, and the aggregate of corporeality. Hence it is that a being is also called the five-fold aggregates. Such designation is of value in ridding oneself of the illusions.[2]

The aggregate of cognitions refers to the cognition element in the eighty-nine different kinds of thoughts. It arises in connection with the avenues of the senses and of the mind. The cognition element is only that which knows

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[1] "The individual does not know the absolute truth. He adapts not to reality. He goes through life acting as if his guiding fiction were the reality." Lewis Way in "*Alfred Adler*" Penguin p 91.

[2] See p. 52.

its object as being color, sound, touch or as the sensuous kind, of a sublimer kind as in the trances, or as being supramundane. The aggregate of feelings stands for the different kinds of feelings that arise at various times in us. In this group are the feelings of happiness, of unhappiness, of indifference, of physical pain and of physical comfort. The nature of feeling is the tasting of the flavor of the object. The aggregate of perceptions are the different kinds of perceptions by the mind at various times in a person's life. The nature of this element is the marking, or making a note of, the differences in objects for subsequent identification. It is in this sense that it includes the function of memory. Next, the aggregate of formations consists of all the non-cognitive elements that remain when the perception and the feeling elements that have already been mentioned above, have been excluded. These elements, with volition or *kamma* foremost among them, are concerned both in the formation of its own unit, and in the causation of the remote effects such as those at rebirth and during life. Lastly, the aggregate of corporeality is the twenty-eight kinds of matter that are found in the body of the living being.

There are several analogies used to illustrate the manner in which this living being or the five-fold aggregates should be conceived, in order to bring out the unsatisfactoriness in them. One is that in which matter is compared to a hospital, cognition to the patient, feeling to the illness, perception to the disturbance of the elements and formations to the irregular habits that cause the illness. Another compares matter to a mass of froth, feelings to a bubble, perception to a mirage, formations to the trunk of a banana tree; and cogniton to a magical trick.

Life as an Aggregate of Unhappy Events is Ill

Turning to the second way of discerning the first Truth, we see that life as a series of unhappy eventsis ill, also for the added reason that each event gives rise to physical pain and to unhappiness. On examination we find that much of

life's events, from the cradle to the grave, have been distressful[1]. Thus, we experience physical pain and mental suffering at birth, decay, old age, death,[2] in sorrowing, lamentation, unhappiness, despair, parting from the loved and in being united to the hated, and in not getting what one desires. We might have been carried off by illness, accidents and despair. This means that we are oppressed by external causes as well as by internal causes such as disappointments, anxieties and hatreds. Likewise others, too, have them. In the lower worlds, life is worse. Even in our homes we see the cat deals sudden destruction to the mouse. In fact, the world is full of them. But man's experience is so saturated with these phenomena, that he usually pays no attention to them. Nevertheless, one day he will wake up to the great Truth that stands behind all these phenomena.

But yet, we are all in search of permanence, goodness and beauty. Then by these standards, the body of a being is suffering or ill, on account of impermanence (*anicca*), unwholesomeness (*asubha*), painfulness (*dukkha*), and lacking in ego (*anatta*). Hence by this process of examination of the constitution of the body, and the events associated with it, the conclusion is borne down upon the seeker of truth, that the existence of the body is ill.[3]

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[1] *Jātipi dukkhā, jarāpi dukkhā, maraṇampi dukkhā, soka parideva dukkha domanassa upayāsāpi dukkhā, appiyehi sampayogo dukkhā, piyehi vippayogo dukkhā, yaṃpicchaṃ nalabhati tampi dukkhā, saṅkhittena pañcupādānakkhandhā dukkhā.*

[2] Birth, decay, old age, and death are ill not for their inherent nature but because they become the cause of suffering.

[3] *Rupūpādānakkhandho, vedanāpādānakkhandho, saññūpādānakkhandho, saṅkhārāpādānakkhandho, viññāṇūpādānakkhandho idaṃvuccati bhikkhave dukkhaṃ ariyasaccaṃ*.

The aggregate of corporeality in which grasping arises; the aggregate of feelings in which grasping arises, the aggregate of noting in which grasping arises, the aggregate of formations in

The Four Natures of this Noble Truth

This Noble Truth regarding the five-fold aggregates of a living being, has been described in the *Patisambhida Magga* as a mountain of suffering on account of these four natures: of oppressing or causing pain of various sorts (*pīḷanaṭṭho*); the nature of having to be caused or renewed or repaired continually (*saṅkhataṭṭho*), the nature of frequent burning (*santāpaṭṭho*), and the nature of change on account of constant breaking up, (*vipariṇāmaṭṭho*). These are present in each aggregate (*khandha*).

The oppressive nature exists along with or in respect of each of the other three natures such as the need to be renewed continually.

The unsatisfactoriness in being caused or conditioned is seen if we reflect that our enjoyments have been procured at the cost of toil and tears by others. This life was procured on account of past moral acts which involved much sacrifices and hardships, and even after procuring this life, we have to take much trouble in feeding, clothing, and maintaining it.

The unsatisfactoriness in the nature of burning refers to the defilements such as lust, hatred, jealousy and false views, and of the anxieties, sorrows and lamentations that arise at such times. Though it may not be apparent at first sight and may even appear as exciting and enjoyable, on reflection, its true nature will be found to be that. Birth, decay, death, illness, grief, lamentation, pain, unhappiness, greed, ill-will, and delusion have been compared to a burning and are referred to at times as the eleven great fires.

The unsatisfactoriness in the breaking up and in the changes in the body is the occurrence of death and in the changes from happiness and the pleasant to unhappiness and

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which grasping arises, the aggregate of cognition in which grasping arises is called the Noble Truth of Suffering.

the unpleasant. Other changes occur from internal causes such as illnesses, accidents and assaults; or from external causes such as friends becoming enemies or children become disobedient.

THE SECOND NOBLE TRUTH
(*Dukkha Samudaya Ariya Sacca*)

In the Second Noble Truth or the Noble Truth of the Cause of Suffering we inquire what it is that is the cause, the creator of this body of a living being. This is identified as craving or desire.[1] In this we are saying that craving is the chief or the dynamic cause. There are other causes, such as ignorance and volitional activities (*kamma*) that exist and operate together.

Forms of Craving

Cravings are of three kinds:[2] 1. sensuous desires (*kāma taṇhā*), 2. cravings with eternalism (*bhava taṇhā*), 3. cravings with nihilism (*vibhava taṇhā*).

The term 'sensuous' (*kāma*) means the sense object (*vatthu kāma*) and the desires in that sense object (*kilesa kāma*).

The desires in sense objects include desires towards the bodies of living beings. These may be of friends, relatives

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[1] *Yāyaṃ taṇhā ponobhavikā nandirāga sahagatā tatratatrābhi nandinī seyyathidaṃ? Kāma taṇhā, bhava taṇhā, vibhava taṇhā idaṃ vuccati bhikkhave dukkha, samudayaṃ ariyasaccaṃ*

There is a craving that causes an attachment in that particular existence. What may that be? It is the desire in sense objects, the desire that is combined with the false view of eternalism, and the desire that is combined with the false view of nihilism.

[2] A parallel to this in the opinion of K. N. Jayatilleke of the Ceylon University Philosophy Dept. is the Freudian concept of eros, libido and thanatos.

and children. The greatest of the desires is that in regard to one's own body.

Cravings may also exist with desires for that particular kind of existence. By desires for life eternal, is meant thoughts such as 'May I and my dear ones be born to the enjoyment of eternal happiness.' The life that is desired may be that of the *brahmas* of the form or formless plane.

Desires with nihilism, or wishes for annihilation, means the wish for life to cease at death. Thus a person thinks this body is composed of the primary elements. Of them, the earth element unites with the earth, the fluid element with water and so on. Besides that there is no rebirth.

The Totality of Cravings

This is reckoned as being one hundred and eight. This *Fig*ure is arrived at thus. First there are the six objects, i.e., the five sense and the mental objects such as ideas.[1] Such ideas may exist in the above three forms as *kāma*, *bhava* and *vibhava taṇhā*.[2] This may be of the personal or the external object, making thirty-six kinds. Each of them may exist in respect of the three periods of time to make one hundred and eight kinds. This shows the numerous and various forms in which desire may exist.

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[1] These different cravings in respect of the thought object are called cravings in colours (*Rūpa Taṇhā*), in sounds (*Sadda Taṇhā*), in smells (*Gandha Taṇhā*), in tastes (*Rasa Taṇhā*), in contacts (*Phoṭṭhabba Taṇhā*), and in Ideas (*Dhamma Taṇhā*).

[2] Craving may exist in complex forms. Thus there may be desires in any of the six objects taken as good and pleasant in whatever manner and degree as the graspings, ties, fetters, cankers, along with, a sense of attachment to life on the permanency view, or eternalism or with the sense of death ending all, i.e., nihilism and that one should get as much pleasure while life exists.

The Accompaniments of Desire

Desires exist side by side with ignorance, i.e., fundamentally of the Four Noble Truths, and have always been with us. They existed in the past and prompted us to different kinds of actions. Even the moral actions we did in order to secure a happy life in the future, had in them, in latent form, ignorance of the misery of life and of the freedom from suffering in the *nibbāna* element. Thus we get ignorance and craving (*avijjā* and *taṇhā*) as the two roots of existence (*saṃsāra*). These are like 'inexhaustible forces that are constantly throwing up actions of various kinds. The becoming of life is thus originated and then maintained by actions (*kamma*) that have in them cravings and ignorance. On this account life is compared to a flame that is kept up by the oil (fresh desires) that is put into the lamp to replace the oil that has been burned out.

Hence, in the Law of Dependent Origination, when it is said dependent on ignorance arise formations (*avijjā paccayā saṅkhārā*), ignorance is stressed as the more important factor in coming by the present existence. But in regard to future life when it is said dependent on grasping arises becoming (*upādāna paccayā bhavo*), it is craving that is stressed. If we seek a termination of suffering, or the continued roll of lives called *saṃsāra*, the lesson of this should be learnt and the corrective for craving and ignorance applied; that is to proceed to altruistic or desireless action accompanied by wisdom as indicated in the Buddhist way of life or the Noble Eightfold Path.

The Four Natures of this Noble Truth

This craving or the second noble truth has these four natures: the nature of getting together or preparation of the five-fold aggregates which has been taken to be ill (*āyuhanaṭṭho*), of causing a new set of five-fold aggregates or a continuity of being no sooner the old one perished at death (*nidānaṭṭho*), of binding to *saṃsāra* (*saṅyogaṭṭho*)

and of being an obstruction to securing a release by the practice of the path to deliverance (*paḷibodhaṭṭho*).

The creative nature arises on account of the acceptance of the five-fold aggregate as good and as mine. We then take an attachment to life and do various acts in order to maintain that or to bring about a new aggregate. The arising of new units or the five-fold aggregates in a new life without permitting complete cessation at death is the nature of causing a continuity. The creative nature or becoming is implied in the other three.

The nature of binding to *saṃsāra* is like that of tethering an animal to a post. So that although a rope may be long in respect of rebirth as a god (*deva*), and permit it to wander far, yet the being is nonetheless bound, in that at death it again gets another life. The nature of obstruction arises, when a person wishes to take to the proper life of renunciation but puts off doing so making an excuse of things like health, affairs of children, etc., or when having undertaken the observance of the precepts or the life of monks he seeks a relaxation or a modification of the practices.

How Creative Power by Craving is secured

Craving obstructs the getting of wisdom by not permitting the individual to see the disadvantageous or unsatisfactory aspect of the aggregates (*khanda*) of the living being. These were, as stated earlier when dealing with the First Noble Truth, its oppressive nature of having to be continually repaired, otherwise conditioned, of its burning nature and of the fact that it is momentarily breaking up.

Immediate Conditioning by Craving

The grasp of the object, sense or mental, subjectively or objectively as being agreeable and pleasant (*piya rūpaṃ,*

sāta rūpaṃ) is the proximate cause of craving.[1] With craving also arise the fetters (*saṅyojanas*) and the tie ups (*ganthas*) of life with life. That this conditioning, by craving and ignorance for becoming occurs in this life too, may be seen from our own experience, for we know that we want various things and then strive for them and often satisfy such wants. The notion of an ego is a powerful ally to this craving. When we experience unhappiness due to anxieties, disappointments and losses, or engage in quarrels or wars, there too, it is craving for things to which the ego has attached itself.

Conditioning of the Future by Craving

It is admitted by psychologists that volitions are conditioning factors of events. It would be unreasonable to think that such powerful drives as desires, set in darkness as ignorance, throughout a lifetime should come to a sudden halt with a single moment of death.

The English philosopher Hobbes described desire as movement on the mind. The Buddha has stated much the same in saying 'dependent on grasping, arises becoming.' some desires are satisfied in getting the object desired. Some are not satisfied, and some are only partly satisfied. Another life is necessary for the satisfaction of those desires. The presence of such desires ensures the continuity of the stream of thoughts, even though at the times called death, there is a break in the material body or the stream of physical atoms. However, immediately after the death thought in one life, there arises the rebirth thought in

[1] *Yaṃ loke piya rūpam sātarūpaṃ ethesā taṇhā uppajjamānā uppajjati ettha nivisamānā nivisati*.

In this world should there be an object, that has the nature of agreeability and of being pleasant, craving that has not arisen arises in that, and the craving that has arisen takes foot hold. That object may refer to any of the thought bases or receptors, to the stimuli such as color and sound, and to the various thoughts.

another life,[1] with one of the death signs as object. We have described how both that thought and its object are the results of a past moral or immoral action. This process is assisted by the defilements in the impulsion thoughts of the dying being.

If these desires are of a base kind, such as sense enjoyment involving loss of life, greed in property and envy of the prosperity of others, such thoughts and actions lead to regression in the scale of life, tending to life in sub-human form. When the desires are of a superior kind, yet still impelled by notions of a self in a latent form, we engage in moral actions as to help others, to develop one's own good qualities, and to suppress one's evil actions and thoughts, we do so with the subconscious expectation of better lives for ourselves. These lead to life in more fortunate places with bodies in the form of gods or *devas*. If these desires were such as to beget life as *brahmas*, we develop the trances that suppress evil powerfully and cleanse our thoughts to a large extent. Thus, life in whatever form, like every other thing, depends on conditions.

Can There Be a Sixth Natural Law Called God?

We have thus looked at life objectively and seen that like everything mundane, it was subject to birth and death, and operating according to the five orders of natural laws. If it be asserted that there is a sixth order, either existing separately or as an all-inclusive one, then it is necessary to show where the five laws are imperfect and what additional

[1] Unimpeachable evidence is accumulating of the fact of there being past lives. Psychiatrists and psychologists have got certain people under hypnosis to describe their past lives. Newspapers too have reported others, such as that of a Shanti Devi in the *Illustrated Weekly of India* of Dec. 15, 1935, and of Nellie Horster in the *Milwaukie Sentinel* of Sept. 5, 1892.

benefit one can derive from such a postulation. Otherwise it should be rejected as unnecessary and unhelpful. [1]

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[1] The following excerpts are taken from the *Introduction to Philosphical Analysis* by John Hospers, pp. 322–359. The refutations of arguments therein are in respect of God as a supernatural being, although, according to Pantheism, God is nature itself.

A. The ontological argument: existence is necessary for perfection. Therefore God exists. But a thing can also be imagined and then that need not exist.

B. The causal argument: the million things that exist in the universe must have come from somewhere, some great cause producing it. But it speaks nothing of the characteristics of God. This argument leads to an infinite regress only to ask the same of God; and so we shall have two mysteries instead of one.

The idea of first cause. If God was the first cause, we can keep asking the same question. What caused God? What was before it, a blank?

God as conceived by most worshippers is temporal. God does this, then does that; God creates mankind, then repents the act; God looks down on human beings, and sometimes answers their prayers, and on occasion performs miracles. Such a God is temporal. He is actively in the midst of the time stream. If it is asserted that he is everlasting, this only means that he lasts an unusually long time—an infinite time. A causal relation is a relation among temporal events.

C. The argument from miracles: The occurrence of miracles proves that God exists. The first objection is simply "Miracles have not occurred" If it did, no event could be called a miracle as long as it is an instance of any law, known or unknown. Moreover, to be a miracle it should not occur if we again had the same set of conditions. Then again there is indeterminism—that two identical sets of conditions may yet be followed by non-identical events. How then could we attribute the event to God.

D. the utility argument: It is one popular in the public mind, but not used in philosophical circles. The argument is that God is a great and indispensable moral influence, without which human beings would not live good lives. To this there are several

considerations: 1. of which religious beliefs is that argument true, seeing they contradict one another, 2. is religion indispensable to good conduct and in doing so whether all moral acts done in the name of religion were done because of religion, of parental authority, or public opinion, or law? Even if religious beliefs made people lead better lives, would this show that their beliefs were true?

E. The argument from religious experience: can we infer from the occurrence of such experiences that a deity exists to cause them? If a Christian proves religious experience of the Christian God, what of those of other religions.

F. The teleological argument (argument from design) “Look upon the world says the argument and you will find that it shows many evidences of order and design, not blind chance, but order, design and purpose governs the universe; and where there is purpose there must be a purposer. What kind of deity can this be?

1. Is there an omnipotent, benevolent deity: After the publication of Charles Darwin’s *The Origin of Species* the teleological argument rapidly declined. The evolutionary hypothesis seemed to contradict the belief in a benevolent designer. Through countless ages animals evolve adjusting themselves to changing conditions, killing and eating other animals, living in constant danger, and dying in torment. A small change in the environment or disorder in the organism may cause the extinction of life and often the whole species. Then again, there is the problem of the existence of evil. Is God willing to prevent evil but not able? Then he is not omnipotent. Is he able but unwilling willing? Then he is malevolent. Is he both able and willing? Then why is there evil?

2. Is there an omnipotent, malevolent deity: It has been humorously stated that the world was created by the devil.

3. Is there a benevolent, but not omnipotent deity: This view is not very popular because people desire a god or gods who will have power enough to give them heavenly rewards.

CHAPTER XII

THE CESSATION OF LIFE AND THE WAY TO CAUSE THAT CESSATION

THE THIRD NOBLE TRUTH

(*Dukkha Nirodha Ariya Sacca*)[1]

The Mundane and the Supramundane, The Conditioned[2] and the Unconditioned

IN the last chapter we examined the first two Noble Truths. Here we shall look at the remaining two. Now things in nature exist in opposites, such as black and white, good and evil, health and ill-health. Likewise to that which is conditioned there should also be a non-conditioned, and to that which is suffering, there should also be freedom from suffering. This unconditioned event means the existence of characteristics opposite to those which exist with conditioned nature. Unlike in the case of mental and physical units it has neither a beginning or coming into existence, nor an end or ceasing. In contrast to the momentariness of mental and physical phenomena, it is thus everlasting or permanent or deathless. It has no need to be protected or looked after. Were it not for this state, there would be no end to the continuity of life, which is Ill. This end is the Third Noble Truth or the Noble Truth of the Freedom from Suffering. It is called the *nibbāna* element and has been described earlier.

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[1] *Yo tassāyeva taṇhāya asesa virāga nirodho cāgo paṭinissaggo mutti anālayo idaṃ vuccati bhikkhave dukkha nirodhaṃ ariya saccaṃ*—Should there be a complete detachment from, an absolute cessation from, a forsaking of, a deliverance from, a non-attraction to craving, that monks, is the Noble Truth of the Cessation of Suffering.

[2] *Kamma citta utu āhārehi saṅkhāriyantīti saṅkhārā*. The name conditioned means that which is fashioned or formed by conditions such as past-action, thoughts, energy, and nutriment.

It represents a state to be won by the complete annihilation, the abandoning and the forsaking of every form of desire,[1] which is the root cause of existence. It is a state of freedom from the great fires of the defilements. The german philosopher Schopenhauer came close to this view, when he said that desire for living, was the cause of existence. But the Buddha added that the desire for sense enjoyments as an equally potent cause of existence. Now if, as hobbes contends, desire was mental movement, then it is understandable why the stoppage of this movement, means the cessation of life. Yet the ending of this life process does not create a void or vacuum, but the advent of a positive state, an element which may be known only by some thoughts in the process of the mind avenue. Its existence has been testified to by the saints. For all these reasons, nibbāna the goal of Buddhism could never be nihilism.

Why it is Called *Nirodha*

Nibbāna is also called *nirodha*, which means a not going on, because it is the ceasing of suffering.

"Jīranthi ve rājarathā sucittā
Atho sarīrampi jaraṃ upeti
Satañca dhammo na jararn upeti
Santo have sabbhi pavedayanti."

Richly embellished chariots assuredly decay. So too the body decays. But should the Virtuous Ones have described a Nibbāna, that element never decays."

The pain of hunger ceases with the intake of food. But it recurs after a time. Likewise in *saṃsāra* there is a periodical cessation of life only to be manifested elsewhere. But in *Nibbāna*, there is none of this recurrence.[2]

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[1] *Taṇhāya pahānaṃ ayaṃ vuccati dukkha nirodho*.
The expulsion of craving is called the cessation of suffering.

[2] *Yathāpi mule anupaddave dalhe*
Chinnopi rukkho punareva rūhati

Nirodha also means the absence (*ni*) of the prison house of *saṃsāra* (*rodha*).

The Standards in Knowledge.

The characteristic of this element is its tranquility, on account of the absence of defilements. Its function is the absence of ceasing and of change. Its manifestation is the absence of symbol or sign such as matter, feeling, perception, etc. There is no proximate cause as it is unconditioned.

The Four Natures of the Noble Truth

It has the nature of release from the defilements and the sufferings of the five-fold aggregates (*nissaraṇaṭṭho*), the nature of absence of defilements (*vivekaṭṭho*), the nature of not being renewed (*asaṅkhataṭṭho*), the nature of deathlessness (*amataṭṭho*). The relief from the defilements means that of relief from the burnings of lusts and other passions and also from eleven great fires of birth, death, etc. The nature of relief from suffering is found in the other three natures as well. The absence of defilements means the freedom from even the possibility of them, and hence it is an absolute peace (*anuppāda nirodha*). The unconditioned nature means that, unlike in mundane or conditioned things where there is wasting, ageing, and ceasing, and where the continuity of a thing has to be effected by keeping up the causal influence, there is an absence of such a state of affairs in *nibbāna*.

Evampi taṇhānusaye anūhate
Nibbattati dukkhamidaṃ punappunaṃ
Just as a tree that is not cut at its roots grows again so does craving that is not destroyed at its unconscious existence, cause this recurrent suffering.

Other Attributes of *Nibbāna*

It is Uncompounded

It is meaningless to describe this element in terms of sense experience. Consequently, it is best presented in relation to things which may become objects only of the avenues of the mind. What these are, have been previously discussed—see mental object. The general point is that *nibbāna* is distinct from sense objects, and is neither a mental event nor a concept. Then *nibbāna* or the absolute, is a single, i.e., uncompounded element, a real (*paramattha dhamma*) existing in its own right. It is different from the conditioned phenomena of matter and mind, which exist only as compound states or the units. Its singleness is therefore logically correct.

It is Unrelated to Time

This *nibbāna* element has no relation to time. And in this respect, it is like phenomena, we call concepts. So *nibbāna* is timeless, deathless and unceasing from absence of an end either as birth or death.

It is Without Self

It goes without saying, that when in compound states there is no self to bind the elements or to bring them under its subjection, like some master or governor, that neither in Nibbāna can there be a self apart from this element. Hence, there can be no Experiencer in Nibbāna. Those who are afraid of such a state may, on further reflection, have their fears allayed by the fact, that in the state known to them, namely the Five-fold Aggregate or the body, there is no Ego or Experiencer either—only an experiencing.

It is Purity

Being single or uncompounded, it is a state freed from the fires, a refuge from the oppression by the elements of lust, ill-will and delusion. It is also a state of freedom from the sufferings of the body or the five-fold aggregates, which

exists only as compound states. Hence, *nibbāna* is called the withering of lust, of ill-will, and of delusion (*rāgakkhaya*, *dosakkhaya*, *mohakkhaya*.) This, in other words, is purification, not of an age old soul, but a state of freedom from the arising of defilements in a new development. If one grasps the unconditioned and the single nature, one can understand the seventy-five terms used to describe it. Such terms are: purity, peace, security, deliverance, unique, indestructible, safety etc. [1]

The Peace and the Happiness in *Nibbāna*

Now, there are two kinds of happiness; one, that is experienced emotionally, bounded by time and is transitory (*vedayita sukha*); and the other which is a state of freedom from pain and happiness, un-harassed by the fires of the defilements of the five-fold aggregates. It is called a *vimutti* or *vupasama sukha*, because it is the happiness or peace of an entirely different kind of element. This might be a difficult thing for us to grasp, since happiness is ordinarily taken as complementary to sense experience. Reason and metaphor are of little avail to describe what color is to a blind man, but to those who have eyes, color is real. So it is with the happiness of the *nibbāna* element. Buddha taught that happiness as something permanent and wholesome, could not be found in mundane enjoyments or in conditioned things, which are by nature changeable phenomena. Then sense enjoyment contradicts rather than compliments happiness. The grim truth for those who seek an end, a final goal or lasting happiness in finite things, is that what is permanent cannot come from that which is changeable and transient. The best way to understand the happiness in the element of *nibbāna* so radically different to mundane elements is as a relief therein from every kind of suffering or painful experience (*vūpasama sukha*). Such an

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[1] See Dr. C. L. A. de Silva's *Four Essential Doctrines of Buddhism*, pp. 89 and 98 for the remaining terms.

experience can be a real thing for we know a state of freedom from headache or debt or slavery is a live thing.

The Realization of the Positive Nature of *Nibbāna*

Reals differ from non-reals or concepts in having four natures. They can be understood (*pariññā*) such as in the ability to understand the individual and the general characteristics of a thing. They can be developed (*bhāvanā*) and by so doing one can procure higher states as the trances. They can be put away (*pahāna*) otherwise suppressed and repressed. The fourth nature is that they can be proved or realised (*sacchi karana*). This realization of *nibbāna* may be with the aid of the senses or the mind. In respect of the former, just as the experience of pain and its removal may be had when a finger gets burnt and then withdrawn, so a relief from the fatigue and the oppressions of the body is experienced by the body with the seeing of the *nibbāna* element. As for the latter, there are certain experiences such as joys and sorrows that are known only by the mind. Such are the experiences of the saint who experiences *nibbāna* as the real; and that of the freedom from the fears of the lower world thereat.

THE FOURTH NOBLE TRUTH

(*Dukkha Nirodha Gāminī Paṭipadā Ariya Sacca or Magga Sacca*.)

The Path of Knowledge and Desireless Action.

This state of permanence cannot be had by wishful thinking, but has to be assiduously striven for. If life came about on account of ignorance and craving, then the cessation of life should be effected by their opposites, namely, wisdom and non-craving. The key to its attainment is wisdom. One helps the other, for craving too is an event that is conditioned by ignorance. This is a term for the well-nigh impenetrable wall of the illusions of permanence,

wholesomeness, happiness, and of self in these five-fold aggregates. We have been engaged in talk and action based on such false assumptions as I, mine from a beginningless past. This notion of an ego has been a powerful ally of craving. We can see that in everyday matters for we do not concern ourselves over others or in things not ours. But if we should see living beings as a aggregate of conditioned elements which by such nature are subject to birth and death, lacking in self and of momentary duration, we would not desire such things. The development of this wisdom, which is able to discern the reality in this body or the five-fold aggregates, has to be achieved by the concurrent destruction of the numerous desires within us. The help is reciprocal. Like the scientists, the Buddha exhorts everyone to learn the dhamma by one's own diligent inquiry. In this inquiry, the role of the Buddha is only that of a teacher. Even without him, it is possible to arrive at this understanding. No doubt, it is so much easier by following His instructions.

The Combined and Co-ordinated effort

To this end, in the Noble Truth of the Way to the Cessation of Suffering, the Buddha advocates a method which is called the Noble Eight-fold Path[1] because it consists of eight parts. They are: right view, right aspirations, right speech, right action, right livelihood, right effort, right mindfulness and right concentration. It will be seen that wisdom alone as right view cannot achieve this realization but has to function along with seven others. This

[1] *Aya meva ariyo aṭṭhangiko maggo seyyathidaṃ? Sammā diṭṭhi, sammā sankappo, sammā vācā, sammā kammanto,sammā ājivo, sammā vāyāmo, sammā sati, sammā samādhi-idaṃ vuccati bhikkhave dukkha nirodha gāmini paṭipadā ariya saccaṃ*. What is the Noble Eight-fold Path? Right view, right aspirations, right speech, right actions, right livelihood, right effort, right mindfulness, right concentration; this is called the Noble Truth of the Way to the Cessation of Suffering.

path of purity, wisdom, and effort in its entirety is peculiar, to Buddhism. It has been described as an unfailing path to cross the ocean of *saṃsāra*; and in view of the atmosphere of distrust and fear among nations, and the sense of meaninglessness of life felt by many people today, should command the serious and urgent consideration of the thinkers of the east and the west. In the pursuit of this path of healthy mindedness, the individual should avoid the extremes of self-indulgence and of self-mortification. Hence, the path is also called the middle way. He needs great courage, hope and trust and should have a contempt for doubts, fears, worries, laziness and sensual pleasures.

He proceeds to act well to others and to himself. He does not increase the suffering of others and his own advance is not at the expense of others.

The Basic Position of Moral Conduct (*Sīla*)

The development of wisdom and the extinction of desire is made possible by this path. It is significant that the eight parts of the path may be grouped in a three-fold way as moral conduct, concentration and wisdom, (*sīla*, *samādhi* and *paññā*). Although this suggests an order of development, it is an order of fulfilment. Hence, a simultaneous practice of all three aspects should be had. The real growth, however, of concentration occurs only when conduct is right and firm. When concentration is well established, real wisdom gets going. The fulfilment of moral conduct, which comes first, comprises right speech, right action, and right livelihood. This means that the individual is pure in speech, action and search of food, and these activities are influenced by right view and noble ideals. At the same time, he strives to secure peace of mind, ease, and joy with the meditations. It does not mean that one should wait for perfection of moral conduct or concentration before a person can commence on insight meditation. Finally, there is wisdom made up of right aspirations and right view. It is this wisdom, born of the insight meditations, which in the

end, as the "seeing of things as they really are" (*yathābhūta ñāna dassana*), gives him release or deliverance. That also means that he has understood problems, like the beginning and the end of the world, and of the existence or non-existence of the self: problems, which no amount of theoretical discussion would have solved.

The Order in Which the Constituents are Stated.

Right view is stated first because it is the most important factor to one who seeks *nibbāna*. Right aspiration is next given because it assists in the formation of right view. Right speech is given next, because speech is righted by correct thinking. Right action follows because words are put into action. The fulfilment of right speech and right action is right livelihood. The individual next proceeds to right effort in all bodily postures. He next introspects to find out what *dhammas* are helpful in his efforts and what are not, and so right mindfulness comes next. Mindfulness helps him to fix his mind on a single object, and this is concentration.

The Benefits of the Practice of the Path.

Certainly, the practice of this path gives one great material benefits, in the integration of the personality on an intellectual and ethical basis in the present, and in causing happier lives in the future. Instances are given in the *suttas*, where the *satipaṭṭhānas* and the *bojjhangas* have effected the cure of disease. There is also the risk that he may find himself more deeply attached, in a future life, in the things which it has procured. But one who seeks deliverance should practice it not with the hope of securing future rewards, but simply to terminate desire or craving (*taṇhā*), and so destroy suffering or existence itself. As mentioned, the eight parts may be practiced in any order, and at various times, causing a gradual transformation of the personality by the expulsion of the rivals or the opposites of each

constituent of the path. This is the mundane practice[1] of the path. But finally, at the moment of the occurrence of the supramundane path thought, all parts must be present, so that each constituent would have the power to destroy its particular aspects of evil, in an absolute way. This is the supramundane practice of the path. Then there starts a progressive development of his vision that takes a person through the four supramundane saintly states, in one or many lives, to end with the attainment of the *nibbāna* element itself.

The vision of the *nibbāna* element carrying out at the same time the functions of the one eight-fold path occurs on four occasions. These occasions or moments are called the stream winner, the once returner, the non-returner and the *arahant* path thoughts. But once an individual has attained a path he can enter its fruition (*phala samāpatti*) at will. He can have a vision of this *nibbāna* element and enjoy its peace as he wishes.

The functions of the wisdom in the supramundane path otherwise enlightenment are four. There are understanding the nature of life or the five-fold aggregates (*pariñña*) expulsion of the cause of that, otherwise the defilements (*pahāna*), the realization or the proof of *nibbāna* (*saccikātabbā*) and the development of the path (*bhāvetabbā*). The expulsion of the defilements which occurs with this vision of *nibbāna* is a destruction (*samuccheda pahāna*) whereas in the insight wisdoms it is a repression (*tadaṅga pahāna*) and in the mundane trance it is a suppression (*vikkhambhana pahāna*).

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[1] The mundane path (*pubba bhāga paṭipadā*) exists up to the time of the fifth insight wisdom (the purity that sees the truth or enlightenment). See p. 270. The path of absolute destruction of defilements in the four path thoughts is the supramundane path.

The Four Natures of this Noble Truth

These natures have been described as that of crossing over from *saṃsāra* (*niyyānaṭṭho*); assisting in the way of arriving at *nibbāna* (*hetuṭṭho*), clear vision of the Four Noble Truths or *nibbāna* as something proved (*dassanaṭṭho*) and of dominance (*adhipateyyaṭṭho*.)

The nature of crossing over from the mundane may be partial as that of the lower worlds by the stream winner saint or complete by the *arahant*. The causation of *nibbāna* or the unconditioned element is by development of virtues and powers by this path. This is also called realization, and is never forgotten thereafter. The vision of *nibbāna* as a dominance is of an unswerving path with the single purpose of attainment of the *nibbāna* element or deliverance. Just as the worlding's cravings for various pleasures of life dominate his actions, so does this supramundane path dominate the activities of the saint.

And once he has attained a path that state asserts a dominant influence on him. He will no longer do evil or think evilly, but is bent on doing moral acts and in perfecting the rest of the path before he can arrive at the *arahant* state.

Part Three: The Moral Philosophy

CHAPTER XIII

THE NOBLE EIGHT-FOLD PATH

The Path of Moral Development[1]

Here we shall examine in a brief way the constituents of this unique path of deliverance. They should be practiced from the loftiest ideals stated as right aspirations and right view and not from any expectations of gains.

A. MORAL CONDUCT OR MORAL HABIT (*Sīla*)

First we come to the category of moral conduct or *sīla*, which comprises the three constituents of right speech, right action and right livelihood. It is an essential factor or *sine-qua-non* for the attainment of higher living, the trances and the paths. Thus, transformation of character must precede transformation of thought.

1. Right Speech (*Samma Vācā*)

Right speech is the avoidance and the expulsion of the four forms of wrong speech,[2] namely, lying, tale bearing, use of harsh words or abuse, and idle talk. Positively, it demands the utterance of truth, the working to unite those who are disunited, the use of gentle words and of words that bring profit to a person. The relation of right speech to right action is that it helps in the control of action through the avenue of speech; hence right speech gets precedence over right action.

Lying is the volition in the impulsion thoughts that are expressed as acts of body or of speech, in respect of things, seen, heard or cognized, seeking to prove that events that

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[1] Synonymous terms for the path are *ekāyano maggo*, *visuddhi magga*, *majjhimā paṭipadā*, *ariya magga*, *bodhi*, *sambodhi*.

[2] *Musāvādā veramaṇī, pisunāvācā veramaṇī, pharusāvācā veramaṇī, Sampapphalāpā veramaṇī ayaṃ vuccati sammāvācā*. Their variety may be gathered from other books on these subjects.

have occurred as not having occurred and events that have not occurred as having occurred.

Tale bearing is to break the agreeability or concord between persons, and make the offender more agreeable by carrying tales.

Abuse is to use words, even when softly spoken, that have a meaning content as to be sharply experienced as if the body was being sawn.

Idle talk is that which destroys one's own welfare or that of others.

2. Right Action (*Sammā Kammantā*)

Now, right action is refraining from and the expulsion of the three forms of wrong action by way of the body,[1] namely, killing, stealing and adultery. One is enjoined not to kill any living and breathing thing.[2] the moral prohibition on stealing, otherwise taking what is not given (*adīnnādānā*), includes acts of cheating, recourse to fraudulent litigation, deception, misappropriation, and so on. The rigid enforcement of non-stealing or the practice of not taking that which has not been freely given is very necessary since its violation has the immediate cause of greed (*lobha*). The commission of adultery entails transgression upon the marital rights of husband and wife, and the violations of rights of women under the protection of parents and guardians.[3] Significantly, Buddhism does not subscribe to

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[1] *Paṇātipāta veramaṇī, adīnnādānā veramaṇī, kāmesu micchācārā veramaṇī ayaṃ vuccati sammā kammanto.*

[2] Five are the ingredients of the killing action course (*kamma patha*), a living being, the knowledge of the living being as such, the mind to kill, the act, and the death thereby.

[3] For men there are 20 kinds of women that are out of bounds. Ten of them are: one protected by mother; by father; by parents; by brother; by sister; by relatives; by cuneage or clan; by religion; by the method "with protection"; by the method "with stick". The

the concept of an indissolvable union between man and woman. If two persons cannot stay together, there is freedom to separate. In the vinaya we find that matters of sexual perversion, of wrong views on what is proper, of incest, etc., are discussed with great candour, and rules laid down for correct behaviour.

The gravity or seriousness of the wrongful acts of body and speech vary in degree,[1] so that their *karmic* effects are proportional to the extent of blame attached to the particular acts. Further, in determining the seriousness of the action, the intention and the extent of pre-meditation and effort have to be taken into account. Thus, no blame attaches to a person who accidentally shoots a man. Where an act was done with much planning, it is more serious than one done without planning. This is essentially the criterion in the concept of criminal responsibility in the world today.

3. Right Livelihood (*Sammā Ajīva*)

Lastly, there is right livelihood which is to refrain from the commission of wrongful acts, whether of body or of speech, as a means of earning a living.[2] Thus, the person who adopts this path, will not act as butchers or professional liars, or take to keeping of animals for sale, set up houses of

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other ten are: those that are living with a man; one purchased; living with mutual consent; as repayment for goods; having received cloth; marriage sanctified by dipping hands into water; as having been made to put off a burden-carrying pad; a slave wife; a servant wife; one captured in a raid; a courtesan engaged for a certain time. Four are the ingredients of such an adulterous act that is an action course: thing out of bounds; the mind to resort thereto; act of resorting; and the tolerance of the union.

[1] See section on Kamma, measure of acts, p. 205.

[2] *Idha ariya sāvako micchā ājīvaṃ pahāya sammā ājīvena jīvikaṃ kappeti ayaṃ vuccati sammā ājivo*.
Should the *aryan* disciple in this training abandoning wrong living, live by resort to a right living that is right living.

ill-fame, and so on. A lay Buddhist is advised against, five trades in particular, viz., engaging in slavery, trade in flesh, in weapons of destruction, in poisons, and in narcotics. This is thus in conformity with what modern governments are attempting to do.

It will be readily admitted when viewed dispassionately that certain vocations are bound to leave permanent damage to the moral, intellectual, and spiritual growth of those who practice them.

A monk should live a life of contentment in accordance with the Vinaya, eschewing the weaknesses and the vanities of the laity, and without being a burden to them.[1]

B. CONCENTRATION (*Samādhi*)

Of the three categories into which the Noble Eight-fold Path is divided, we shall next discuss the second category called concentration or mental training (*samādhi*). This comprises right effort, right mindfulness, and right concentration.

4 Right Effort (*Sammā Vāyāma*)

It is the effort in the suppression of evil and the development of morals.[2] In the attainment of *bodhi*, it is of so strong a kind as to cause a person to think and feel 'may my blood and muscles go dry before I desist from such effort'. In this way, a person specially tries to acquire the

[1] Some terms used in naming such behaviour with a view to getting the requisites are: *kuhanā*, *lapanā*, *nippesikatā*, *lābhenalābhaṃ nijiginsanatā*: or talk to suggest the giving by pretensions to virtue; by attempting to please by carrying children; by assuming airs; by praise, blame, abuse, insult, ridicule of benefactors or would be benefactors; and by trying to get more by lending the gifts, respectively.

[2] For the manner in which evil is expelled by such effort see Control of Evil, pp. 210–212.

trances with the tranquility meditations and the supramundane thoughts with the insight medications.

Right effort is of four kinds: the effort to prevent the arising of unrisen evil, the effort to suppress the risen evil, the effort to arouse the unrisen moral, and the effort to develop the risen moral.

The first refers to the destruction of the roots of evil: attachment ill-will, and delusion, together with other attendant evils such as envy, jealousy, etc.

The second is to engage in the tranquility and insight meditations.

The third is the effort to cause the eight kinds of moral trance states (*aṭṭha samāpatti*)[1] and the four moral supramundane states.

The fourth is the effort to proceed from the first path thought to the second, and so on.

The effort in the six purities (see *Visuddhi*)[2] is the mundane effort; that in the seventh purity or the supramundane thought itself, is the supramundane effort.

5. Right Mindfulness (*Sammā Sati*)

It is the state of calling to mind and comprehending the real worth of things which come as objects of thought. In other words, it is the diligence of a Buddhist and assumes prominence in the practice of the meditations. It is also the mindfulness in the four categories of things taught in the four establishments of mindfulness.

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[1] These are the four trances of the form plane (or five by the *Abhidhamma*) and the four trances of the formless plane.

[2] The effort at various times refers to efforts as the six-fold purities, i.e., in virtue (*sīla visuddhi pāṭimokkha sanvara sīla*, *indriya s.s.*, *ājiva pārisuddhi s.*, *paccaya sannissita s.*), ascetic practices, thought (*citta visuddhi*), insight wisdoms except for enlightenment (*diṭṭhi visuddhi*).

The Establishment of Mindfulness (*Satipaṭṭhāna*)

There are four kinds of meditation exercises called the establishment of mindfulness or the *satipaṭṭhānas* that are stressed by the Buddha as the one path to deliverance.

Right mindfulness may be defined as the living with strong determination to get rid of defilements, with complete awareness, having overcome attachment and ill-will, contemplating the body that is composed of the physical elements in respect of impermanence, infelicity, and impersonality; likewise contemplating the three kinds of feelings; likewise the various kinds of thoughts; likewise phenomena that may have been grasped as the five-fold aggregates, the hindrances, the fields, the elements, and the truths.

As the name implies, the idea in these meditations is to fix thought on the object which is accustomed to float away in the mind. Concentration and wisdom follows this fixation because the mind is then rendered calm and sees the object in its true nature as when looking through the calm waters of a lake. This knowledge is real and profound though it may not be possible to express it in words. Hence, this wisdom is known as *yathā bhūta ñāna dassana* or "seeing things as they really are." However much a person may have come to know logically the nature of life such as its impermanence and absence of self, yet there is another knowledge or experience that is never to be forgotten and can be learned only through the establishment of mindfulness, which belongs to the class called insight meditations.

Insight meditation is the method for getting rid of the twelve illusions mentioned in the first chapter, and which are the immediate cause (*padaṭṭhāna*) of ignorance. This number was got as a multiple of three functions of the mind, namely, knowing, perception and idea formations, in respect of each false notion or hallucination of permanence, wholesomeness, happiness, and self in mundane things.

Their rectification is effected by the penetration of the four densities of continuity, of whole, of functions, and of objects. The principle is to see things as composed of elements that are of only momentary duration and existing to carry out a function, and then being replaced by other elements. The simile of the slaughtered cow illustrates this clearly. The concept cow, though it be killed and skinned, does not disappear, nor is replaced by that of flesh, until it has been cut up into separate parts. This four-fold establishment of mindfulness is called the one path to deliverance (*ekāyanomaggo*)—hence, its importance. In western psychology, too, the place of such introspection in the development of psychological science is unquestioned.

Of course, the ultimate goal of all these meditations is the attainment of *nibbāna*, but the four different kinds of meditations are only different ways of getting to the one goal. Let us look at these briefly.

First, there is the establishment of mindfulness on the physical body. In fact, there are fourteen ways of reflecting on the body. Just to mention two of these, we have the meditations on respiration (*ānāpānā sati*) and on the physical composition of the bodily parts (*kāyagatā sati*). Briefly, in these meditations, one understands the workings of the body that is marked by rise and fall, otherwise birth and death, and realizes that these are done without a soul. With the gaining of this knowledge, there is no desire towards such a body. Then one gives up craving and false views and makes a strong effort to get salvation. This meditation (*kayānupassanā*) is particularly destructive of the hallucination of wholesomeness (*subha saññā vipallāsa*).

Secondly, there is the establishment of mindfulness on feelings wherein one reflects intently on the nine different kinds of feeling that arise at various moments of one's life and is marked by rise and fall. This meditation is

particularly destructive of the hallucination of happiness (*sukha saññā vipallāsa*).

The third kind of establishment of mindfulness is on thoughts. This pertains to reflection on the kinds of thoughts that are marked by rise and fall, and have been experienced during the period of the meditation, such as ill-will, greed, envy, and so on, in sixteen different ways). This is particularly destructive of the hallucination of permanence (*nicca saññā vipallāsa*). The meditation on thoughts, as with the other three, is carried out in respect of their analysis, nature, genesis and cessation.

Lastly, there is the establishment of mindfulness on phenomena or the categories of phenomena that are marked by rise and fall and studied in various ways as the hindrances, the aggregates, the fields, the constituents of enlightenment, and the truths. What are they?

1 A thought having desire in sense pleasure, hatred, laziness, restlessness, remorse, or doubt is considered a thought with a hindrance. The nature of these phenomena is well grasped and also how they arise and pass away.

2. The one who meditates on the division of a being into the five aggregates sees its composite nature and the causes of their arising and their ceasing.

3. The same is true of reflection on the fields, i.e., of senses and of mind. Here one understands that the impact of subject and object (*dvāra ārammaṇa ghaṭṭana*) or the subjective and the objective fields is the cause of the arising of sensations and of other thoughts.

4. As regards the constituents of enlightenment, one reflects on how the seven constituents arise and develop, and whether they are or are not found in him.

5. The fifth of these reflections is on the Four Noble Truths. He knows the fact of suffering in its wide variety,

the cause of suffering, the cessation of the suffering, and the way to that cessation.

This meditation on phenomenology is particularly destructive of the hallucination of soul (*atta saññā vipallāsa*).

In this way the whole of nature (*dhamma*)[1] is reduced to a few words. In this four-fold establishment of mindfulness we understand the body and mind reckoned as the five-fold aggregates. Thus the *kāyānupassanā* is for understanding corporeality or matter, the *vedanānupassanā* is for understanding feelings, the *cittānupassanā* is for understanding thoughts and the *dhammānupassanā* is for understanding perceptions and formations and other phenomena that may not have been included in the first three categories.

6. Right Concentration (*Sammā Samādhi*)

The eighth constituent of the noble eight-fold path is right concentration. This is the coming by the four or five trance states (*samādhi*).[2] When analytically represented it is the development of the non-cognitive element called concentration or singleness of object (*ekaggatā cetasikā*) in moral objects. When meditation persists to the stage that one gets completely absorbed in the object of thought[3] and made possible by suppression of the hindrances, it is called *samādhi*. That, incidentally, is the highest moral act. It is

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[1] The rendering of *dhamma* by norm is not satisfactory. in *dhamma paṭisambhidā* it stands for cause.

[2] *Kusala citt'ekaggata samādhi*. It is the state of one-pointedness of the moral thought that is well fixed in the object. *Ekālambaṇa suṭṭhu ādhānaṃ samādhi. Samādhi* is that state in which the mind is well absorbed in one object.

[3] It has two chacracteristics *pāmokkhalakkhana* and *avikkhepa-lakkhana*, i.e., of preeminence in *kusala dhammas* and non-spread to other objects respectively. Its proximate cause is the supersensuous happiness that is freed from sensuous happiness.

attained by only those who have purified themselves of evil word and action to a high degree by the practice of moral conduct (*sīla*). After obtaining the four or the five trances of the order called trance of the form plane, in an effort to reach more sublime heights, he begins to change the thought object and gets four trance thoughts of a different order called the trance of the formless plane. The mind so calmed[1] becomes a powerful instrument with which to explore the depths of reality by means of wisdom. This calmness of mind so essential to gain insight into reality comes from a removal of the five hindrances which were described earlier. There are, in fact, two ways of obtaining this calmness. These are the two practices called the tranquility and the insight meditations.[2]

(a) Tranquility Meditation (*Samatha Bhāvanā*)

This is the practice of dwelling on any one of forty subjects (*kammaṭṭhānas*) as is best suited to his temperament and is called the tranquility meditation or the *samatha bhāvanā*. For instance, one may choose the earth device (*paṭhavi kasina*). To begin with, he makes a small round plate, out of light-colored clay. With the appropriate instructions from the teachers, the person fixates this object in his mind by gazing intently on it for long. This is called the preparatory image. After a while, he gets a strong vivid image of the object which persists even when his eyes are closed. This is called the visualized image and is something similar to what the psychologists call an 'eidetic image.' then he moves away from the object, i.e., the plate, and continues to meditate on this visualized image. The next

[1] *Nahāniya cunnānaṃ udakanviya*, like water had been added to bath-chalk or *nivāte dipaccinaṃ ṭhiti viya*, like the flame of a lamp when the wind is still.

[2] The special nature of the tranquillity meditation is the subsidence or tranquillization (*samatha*) of the hindrances; that of the insight meditation is to see the formations, i.e., mind and matter in different or special ways (*vipassanā*).

event that occurs is the occurrence of a brilliant light coming through this image. This is called the kasina light or the conceptualized image. His mind is now very calm, as a result of the suppression of the defilements called the hindrances. That is effected by the development of five powers or mental states of confidence (*saddhā*), mindfulness (*sati*), effort (*viriya*), concentration (*samādhi*), and wisdom (*paññā*). These are called the faculties (*indriyas*) and should not be confused with the trance constituents (*jhānaṅgas*). The suppression of the hindrances by the faculties makes a definite stage in the samsaric life of a being. So that the Buddha has compared the presence of the hindrances to being in sleep and the presence of the faculties to being awake. But yet the calmness is the concentration of the sense plane. This is called access concentration (*upacāra samādhi*). Before long he notices this kasina light to glow bigger. It is about this time that he gets the thought of the first trance of the form plane (*paṭhamajjhāna kusala citṭa*), which has five mental factors as its trance constituents. This is the attainment concentration (*appaṇā samādhi*). By continued meditation and progressive elimination of each of these constituents of trance, the person is able to attain higher orders of trance, having forms of happiness that are more and yet more subtle, up to the thought of the fifth trance. In an effort to reach more sublime heights, he changes the thought object and he gets four trance thoughts of a different order called the formless plane. Although, with these, a person has effected a great deal of purification of the defilements of attachment and ill-will, yet ignorance will persist, though less evident.

(b) Insight Meditaton (*Vipassanā Bhāvanā*)

Secondly, there is insight meditation or the *vipassanā bhavanā*, wherein one learns to analyze mental and physical phenomena into their essences or elements and which is the only and the unfailing way to get rid of ignorance (*moha*, *avijjā*). To do that there is a long hard struggle before him.

After getting the trance thought the meditator turns his thoughts in another direction, the way of insight; or he may practice these insight meditations from the onset without first getting the trances. The former is called tranquility preceding insight (*samatha pubba vipassanā*) and the latter is called insight preceding tranquility (*vipassanā pubba samatha*). The latter class of persons is called the pursuers of the direct approach or the dry-visioned (*sukkha vipassaka*). They, too, can get concentration and then that state is called the 'momentary concentration' (*khaṇika samādhi*).

The Insight Wisdoms

But whichever way he adopts, five stages of insight wisdoms, in serial order, can be had. The first is called the purity of views (*diṭṭhi visuddhi*). Here he tries to understand the elements constituting mind and matter in respect of characteristic, function, manifestation and proximate cause. He sees the body and mind as being constantly changed by changing conditions, as interdependent and lacking in an ego. This is called the wisdom that is able to discern mind and matter (*nāma rūpa pariccheda ñāna*).

The second stage of insight wisdom is the purity transcending doubt (*kankhā vitarana visuddhi*). Here he sees the causes and conditions of mind and matter. He sees the body of a living being as caused or conditioned by ignorance, craving, grasping, past action and nutriment. He sees the psychic body as due to the impact of subjective and objective elements. This is called the wisdom in discernment of conditions (*paccaya pariggaha ñāna*). He understands the living being according to dependant origination. As a result, he abandons uncertainty regarding his existence in the three periods of time. He knows there is no doer, except kamma and its result. He knows that nothing passes from one existence to the other existence.

The third stage of insight wisdom is the purity that discerns path from non-path (*maggā magga ñāna dassana*

visuddhi). Here he defines mind and matter of whatever kind, of whatever time of life, as bearing the three marks. He sees them in many ways as painful, as a disease, as a boil, etc. Now, at this stage of tender insight, he gets certain experiences the like of which he never had before. They are: illumination, joy, composure, resolution, exertion, ease, knowledge, equanimity, mindfulness, subtle attachment. They are called the corruptors of insight. They are so-called not because they are evil in themselves, but on account of the possibility of developing cravings, false views and conceit because of them. With this wisdom, he knows that what has arisen in him is not the path.

From that he proceeds to the fourth stage, namely, the purity of the knowledge of progress (*paṭipadā ñāna dassana visuddhi*). This consists of nine wisdoms. they are: 1. contemplation of rise and fall, 2. contemplation of dissolution, 3. appearance as terror, 4. contemplation of danger, 5. contemplation of dispassion, 6. desire for deliverance, 7. contemplation of analysis, 8. equanimity about the formations, 9. conforming to truth.

By these wisdoms he sees the impermanence or the arising and the ceasing of states, and then he has a greater regard to the ceasing. He sees their fearfulness, their faults, and is greatly disappointed. He becomes desirous of being delivered from such states. With that he turns again to the three marks in all formations and comes to the conclusion that all formations are empty of a soul. "No 'I' anywhere". He now abandons all terror and delight and becomes indifferent to the formations. Then there arises the fourth insight wisdom that conforms to truth (*saccānulomika ñāna*). It conforms both to the eight wisdoms that have gone before it and to that in enlightenment that succeeds it.

Enlightenment

The last and the fifth stage of insight wisdom is enlightenment itself, or the purity that sees the truth (*ñāna dassana visuddhi*).[1]

At this moment of Enlightenment there are several mental factors that carry out various functions that are contributory to the attainment of the common end, namely, realization. These are present as establishments of mindfulness, as great efforts, as fulfilments, as faculties, as powers, as constituents of enlightenment and as constituents of the path. Since in each function there are aspects or divisions into 4, 4, 4, 5, 5, 7 and 8, respectively, they make a total of thirty-seven functions. Hence these are called the thirty-seven functions at enlightenment (*bodhipakkhiya dhammas*).

This Enlightenment is a realization of the Four Noble Truths severally and jointly as a system. Hence, it is that these insight meditations by the nature of penetration of intrinsic nature of phenomena are the means of deliverance. This is in contrast with the trances that are a means to a higher life by the suppression of impurities such as the hindrances. This insight wisdom is no other than right view (*sammā diṭṭhi*), so that the last constituent of the path, namely, right concentration (*sammā samādhi*), becomes approximated to the first. The procedure to be followed in causing enlightement has been set out in the description of the establishment of mindfulness.

If this enlightenment or vision of *nibbāna* was gotten with the emphasis on that aspect of mundane phenomena, as absence of permanence of 'thing', it is called the symbol-

[1] The understanding up to the purity transcending doubt is called the full understanding as the known (*natā pariññā*); that up to the purity of the knowledge of progress is called the full understanding as the investigation (*tirana pariññā*); from then on is the full understanding as the abandoning. (*pahāna pariññā*).

less *nibbāna* (*animitta nibbāna*); if as absence of desires it is called the nothing-to-hanker-for *nibbāna* (*appanihita nibbāna*); if as absence of soul it is called egoless *nibbāna* (*suññata nibbāna*).these three aspects of the one reality of *nibbāna* therefore mean that *nibbāna* is seen as something permanent and happy. Mundane phenomena are lacking in happiness or anything that can be taken as permanent. The state of *nibbāna* doesn't to arouse the defilements of lust, attachment, ill-will and delusion. It does not, however, mean that *nibbāna* is emptiness (*suñña*).

C. WISDOM (*Paññā*)

7. Right Aspiration (*Sammā Sankappa*)

In the third category of wisdom or *paññā* we have to consider first what is to be understood by right aspiration, right ideals, or benevolent thinking. It is of three kinds:[1] namely, the aspiration to renounce (*nekkhamma sankappa*), the aspiration of non-hatred (*avyāpāda sankappa*), the aspiration of non-harming, or non-violence (*avihinsā sankappa*). Its fundamental or essence is initial application.

This is of the greatest importance to the remaining seven constituents of the path, which would cease to be so called without right aspiration.

The ideal of renunciation, i.e., essentially of sense pleasures, leads one ultimately to the holy life. Sensuality is an obstacle to attaining the higher truths. The desires in the sensuous things blind a person to what is real and true. They create the illusion of substance and concreteness where there is only emptiness. The sensuous delights as in shows; feed one's appetite, and in the end create only misery, because they never completely satisfy one. They pander to a person's thirst for excitement and sensations as to render

[1] *Nekkhamma sankappa, avyāpāda sankappa, avihinsā sankappa, ayaṃ vuccati sammd sankappo*

him incapable of distinguishing need from greed. They leave him hungering for more. While some shows may cause little harm, the majority create for him a dream world, in which he seeks the fulfilment of his unsatisfied desires. But the remedy is only palliative; it is the unsatisfied desires born of indulging in sensuality which sustains Suffering. This thirst for excitement may lead him to commit evils that besmirch his character and open the path to the lower worlds. This would be like the moth that plunges into the fire and meets its end. The Buddhist injunction to control one's desires for sense enjoyment is in many respects like the need for sublimating certain desires to gain health. In similar terms Aldous Huxley too, suggests that the person non-attached to his bodily sensations and lusts is the ideal man.[1] This ideal of renunciation is achieved by observing the five, the eight and the ten precepts; the ascetic practices; and by engaging in insight meditation.

The second ideal of non-hatred means to have thoughts free from hatred to be full of friendliness or love to all living beings. That is to say, to be a person who cultivates the meditation on universal love (*mettā bhāvanā*).

The third ideal of non-harming asks us to have kindness or compassion to beings in distress. Such a person does not wish destruction or injury to living beings, but always strives to help them. The Buddhist outlook on these three ideals of denial of sense pleasure, universal love and compassion has a direct bearing on what we earlier identified as the three roots of evil. Thus renunciation is the destruction of attachment or lust. Love is the destruction of ill-will, and compassion, which springs from an understanding of suffering, leads to the elimination of delusion. This is for the reason that the notion of renunciation springs from the root of non-attachment, the notion of non-hatred springs from the root of non-ill-will,

[1] Aldous Huxley in *Ends and Means*, Chatto and Windus, pp. 3–6.

and the notion of non-harming springs from the root of non-delusion, for life is suffering.

In the attainment of the mundane trances the suppression of sensuous desires (*kāma vitakka*) and of hatred (*vyāpāda vitakka*) becomes two accomplishments of trance. The former occurs in thirty-eight of the forty meditations. The latter occurs in the meditation on love (*mettā bhāvanā*). The suppression of violence and cruelty (*vihinsā vitakka*) occurs in the meditation on kindness (*karunā bhāvanā*). In the insight meditations, initial application (*vitakka*) as right aspirations arises at the moment of enlightenment to destroy the thoughts of sensuous pleasure, hatred and violence at their roots.

8. Right View (*Sammā Diṭṭhi*)[1]

Right view is the other constituent of the category of wisdom. We know that views may be either right or wrong. Our experience attests to the relativity of personal judgments of right and wrong. Yet, the Buddha has been able to see beyond this seeming arbitrariness of our judgments. The aim of ethics in Buddhism is the performance of duty, rightly conceived. It is not the pursuit of happiness. What Buddha asserts is a pragmatic approach, similar to William James' pragmatism. The Buddha said that events may naturally lead to effects which are beneficial, agreeable or pleasant, or to those that are harmful and detrimental to one's welfare; so that good and evil, right and wrong are determined by the consequences of actions—hence the pragmatism in making value judgments. In this way, Buddha has been able to show what are right and wrong views, and what are right and wrong speech. At the highest level of the Noble Eight-Fold Path, right view represent the knowledge or wisdom of the Four Noble

[1] *Sammā aviparitato passatīti sammā diṭṭhi*

Truths at enlightenment (*bodhi*)[1] that has been obtained by the cultivation of insight wisdom. At the lowest level, it is the wisdom that people are the bearers of their own *kamma*.[2] There is no creator but *kamma*—self is a myth. Indeed a vast field of knowledge[3] is compressed into it.

More specifically the Buddha enumerates ten views as being right (*dasa vatthuka sammā diṭṭhi*).[4]

These ten views are: that there are effects to acts of charity; to aggregate offerings such as flowers; to giving gifts to those worthy of honor; to acts of philanthropy and misanthropy; that there is this world into which beings are born from other worlds, that there are other worlds into which a person may be reborn from here; that there are effects to good and bad actions towards mother and father; that life does not end with death; that beings in same places are born spontaneously and that there are beings who have acquired special abilities, with which they have seen these other worlds and the process of rebirth into them. It is clear then, that right view is very important, since they are the

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[1] *Dukkhe ñāṇaṃ dukkha samudaye ñāṇaṃ dukkha nirodhe ñāṇaṃ, dukkha nirodha gāminiyā paṭipadāya ñāṇaṃ ayaṃ vuccati sammā diṭṭhi.*

[2] See p. 203 n. 1

[3] Right view has also been presented in a different way as the four foods: material food, contact as food, volition as food, and cognition as food. See food relation, p. 223. All beings that are born are maintained on account of these conditions to mind and matter whether they be of a gross kind or subtle kind; and thereby they are a cause of the sufferings of existence. In this way fear arises in such foods or conditions.

[4] *Sammā diṭṭhiko hoti, aviparita dassano, atthi dinnaṃ atthi yiṭṭaṃ, atthi hutaṃ, atthi sukata dukkaṭānaṃ kammānaṃ phalaṃ vipāko, atthi ayaṃ loko, atthi paroloko, atthi mātā, atthi pitā, atthi sattā opapātika atthi loko samaṇā brāhmanā samaggata sammā paṭipannā. Ye imañca lokaṃ parañca lokaṃ sayaṃ abhiñña sacchikatvā pave dantiti.*

founts or springs of all our actions; and if these should get fouled, then all our actions would be vitiated.

IN RETROSPECT

Finally, let us summarize in brief, the contents of the series of thirteen chapters which we end now. We began by dividing the subject of *abhidhamma* or the higher teaching of Buddhism, into the subject of Buddhist science pertaining to both mind and matter and metaphysics. After outlining our field of inquiry we showed that Buddhist science is the study of elements which are put into a four-fold classification called: the cognitive element (*citta*), the non-cognitive elements, or mental factors (*cetasikas*), the physical elements (*rūpa*), and *nibbāna*, the unconditioned element. The first three kinds of elements, having no substance and lacking any permanency, are in a constant state of flux. It was on this account they were called mundane (*loka*). What is more, they are merely functions in that they arise to perform the various kinds of activities that constitute life. Following this, we discussed the five classes of universal laws, including moral law, under which all phenomena operated. Then we proceeded to consider the elemental analysis of these phenomena. In the analysis of mind or mental phenomena we began with a division of each thought unit into two parts, the cognitive and the non-cognitive elements. To understand the working of mental processes and their effect on the body, we had to consider topics such as feeling, motive, response, object, and base. One outstanding impression was the amazing congruence at several points, of the Buddhist teaching on the mind, with that of contemporary psychology. This is certainly an exciting area of research for students of Buddhism interested in the study of the mind.

Our next major topic was matter and its function. Again the parallels with physical science were revealed in the profundity of the Buddhist teaching. This was especially so in the discussions of the four causal conditions of matter,

i.e., heat, nutriment, thoughts and past-actions, which are basic to a knowledge of mind and body. Besides, there three groups of phenomena that constitute mind and matter, we considered phenomena known as ideas or concepts which often hide from us the realities in things, and lastly, the transcendent phenomenon of *nibbāna*, which is unique in being an uncompounded or single element that is uncaused.

From this static account of phenomena, we turned to a more dynamic account investigating thoughts and actions, the subconscious, sleep, and dreams, inequalities in life, death, rebirth, and purification. It was in this connection that we studied the important topics of thought process, and causal relations or influences, for the different ways in which a cause eventuates in an effect. From this we could see that life and nature consisted of a cyclic operation of events whereby an individual has a variety of ties, extending into the remote past. It was a complex and self-regulating mechanism.

Having understood the nature of life and its working in many ways we subsumed this knowledge in the last three chapters under four propositions called the noble truths. By the standards of permanence, peace, and goodness, we concluded that the body of the living being was unsatisfactory. Apart from the ills which are suffering, we saw that even the little happiness therein was of a fleeting nature and fraught with fear, and so was ill. The cause of that unsatisfactory life lay in actions (*kamma*) governed by ignorance and craving, with desires for living and for sense enjoyments as the most prominent. If one desired to be delivered permanently from such a life into a state of perfection, which had to exist by rational thinking and which was testified to by the saints, the way was to get rid of craving in all its forms. For that, the only way was the practice of the Noble Eight-fold Path of desireless moral action. This, like all noble things, is as difficult as it is rare. This course of action includes training the mind to have a

better understanding of the true nature of things, otherwise wisdom.

Therefore one should realize the shortness of life and its illusory nature.[1] He should resolve to make the best use of the opportunity that this life gives us by earnestly striving upon the Noble Eight-fold Path.

May all beings be well and happy!

[1] In this way we have also tried to present Buddhism as the attempt to rid oneself of the illusions that beset all living beings, by study, practice, and realization.

Appendix

APPENDIX

A. THE SEATS OF THE MIND

The Seat of the Eye Cognition (*Cakkhu Pasāda*)

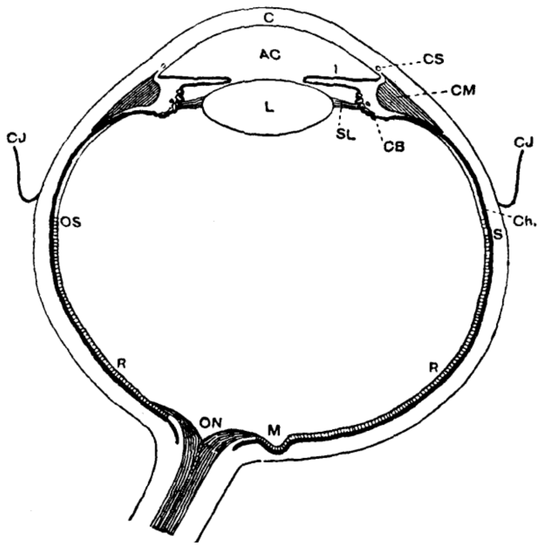


Fig. 30 Diagram of the eye. C, cornea; AC, anterior chamber; I. iris; L, lens; CM, ciliary muscle; SL, suspensory ligament; CB, ciliary body; CJ, conjuctiva; Ch., choroid; S, sclerotic; R, retina; M, macula; ON, optic nerve; OS, ora serrata.

THE physiological teaching is that the eye consists of three coats of which the outermost is the sclerotic, the innermost is the retina and the middle coat is called the choroid. The interior of the eye is filled with the aqueous and the vitreous humors and the crystalline lens. There is also in the interior a contractile and perforated curtain, the iris, which regulates the admission of light.

Light waves from an object in front are refracted (bent from their straight path) by the cornea, lens, and the humors and after traversing through the several layers of the retina activates the rods and cones—which are the sensitive nerve endings (layers 6-9, *Fig*. 31) and also forms an inverted and reduced image of the object.

The impulses generated here are conveyed along the optic nerve to the brain through a series of nerve and nerve cell connections. In the brain the impulses are analyzed, interpreted, and the response determined. Outward impulses then go out to various parts of the body.

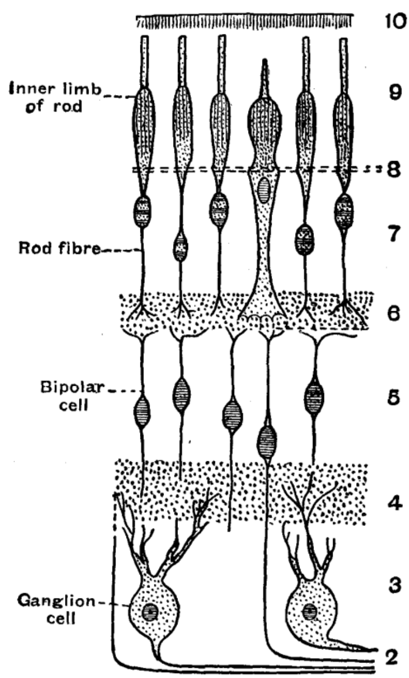


Fig. 31 Diagram of the retinal elements showing the several layers (Schultze).

In Buddhist teachings the sensitive elements of the eye are described as set in the black circle that is surrounded by the white of the eye. It lies where the shadow of the object falls. It is spread like a drop of oil that pervades seven membranes made of cotton. The eye, as an organ of visual perception is reckoned as the sensitive elements (*pasāda cakkhu*) and the non-sensitive elements (*sasambhāra cakkhu*). The sensitive elements are so few that if they were collected together, the heap would be no larger than the head of a louse. The eye sense is described as delighting in color contrasts like a serpent that lives in uneven places like ant holes.

The Seat of the Ear Cognition (*Sota Pasāda*)

The physiological teaching is that sound vibrations are transmitted as alternate waves of condensation and rarefaction and ultimately affect the hair cells at the extremity of the auditory nerve in the cochlea. In the external ear they are caught up and travel through the air; in the middle ear through solid structures, i.e., membranes and three little bones or ossicles in the internal ear, which contain the receptors, through fluid. These vibrations set the basilar membrane vibrating in harmony. These in turn cause a movement of the hair cells of the organ of corti of the internal ear.

The Buddhist teaching is that the sensitive element is set in the form of a ring beset with fine copper coloured hairs deep in the ear canal. If this be taken along with the simile of the ear sense to a crocodile that does not see on dry land and can sleep only at the bottom of deep water it seems to point out the organ of corti rather than the ear drum as the site of the sensitive element.

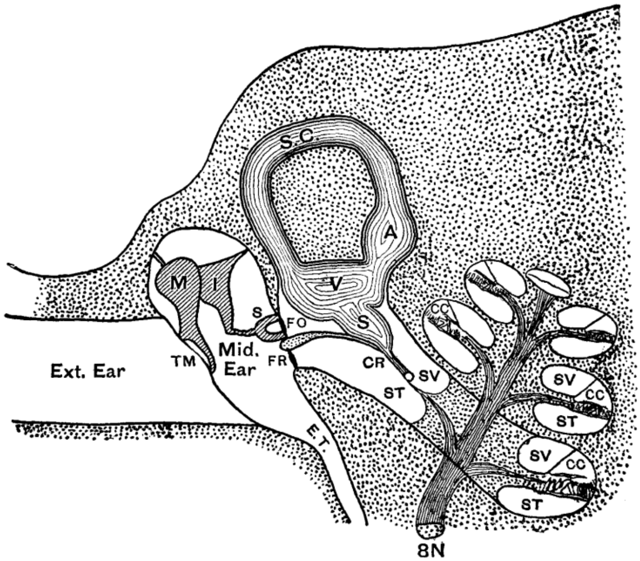


Fig. 32 Diagram of ear. TM, tympanic membrane; M, malleus; I, incus; S, stapes; SC, semicircular canal; FO, foramen ovate; CC, the canal of the cochlea with the basilar membrane; 8N, is the 8th nerve.

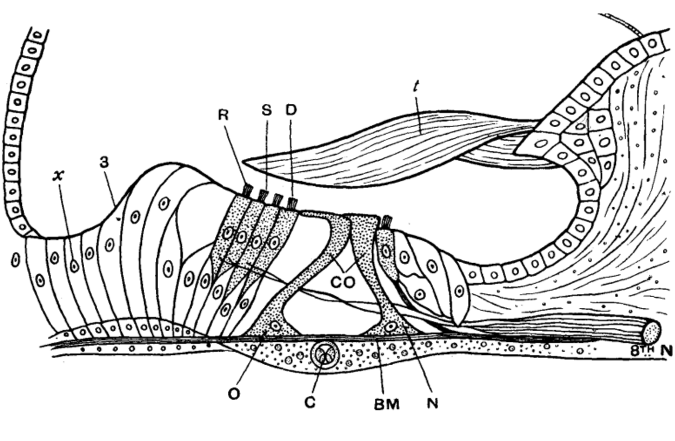


Fig. 33 Diagram of a vertical section of the organ of corti (J.A. Hewitt). BM is the basilar membrane; OC organ of corti; RS D, the hair cells; 8th N, eighth nerve.

The Seat of the Nose Cognition (*Ghāna Pasāda*)

The physiological teaching is that the sensitive part is limited to that part of the nasal mucuous membrane that covers the upper turbinal bone and the adjacent nasal septum. Here there are the olfactory cells. The odorous substance should be carried to the sensitive part by air currents or by gaseous diffusion and by inspiration, and should be in a gaseous state.

The Buddhist teaching is that the sensitive element is high up in the nose in an area like a goat's cloven hoof. The nose sense is compared to a bird that feels safe from missiles when in the high skies.

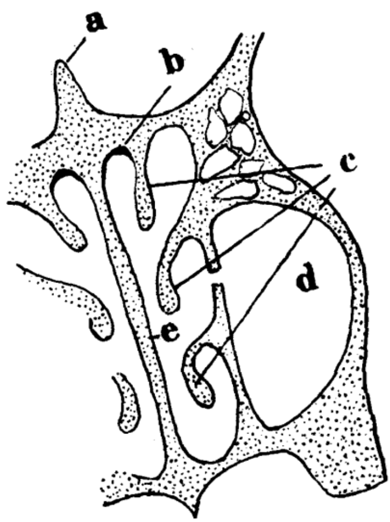


Fig. 34 Diagram of a transverse section through the nasal cavities (Best and Taylor). *a*, crista gallae: *b*, Olfactory area; *c*; nasal conchae; *d*, maximal sinus *e*, nasal septum.

If in each nostril the nasal septum and the upper turbinal bone be taken along with the olfactory cleft between them it fits in with the simile of a cloven hoof.

The Seat of the Tongue Cognition (*Jivhā Pasāda*)

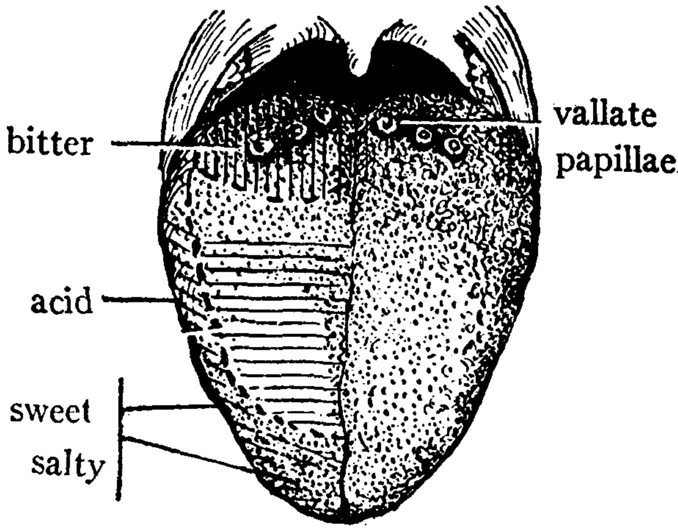


Fig. 35 Diagram to show the distribution of taste sensation (Best and Taylor).

The physiological teaching is that the surface of the tongue is set with three kinds of papillae or projections of the surface, and gives the tongue its characteristic roughness. These are the circumvallate, the fungiform and the conical and filiform papillae. The sense of taste lies in the first two, while the others are mechanical and tactile in function. In the circumvallate papillae are the structures called the taste buds in which are the microscopic cells (gustatory cells). These are connected to a nerve.

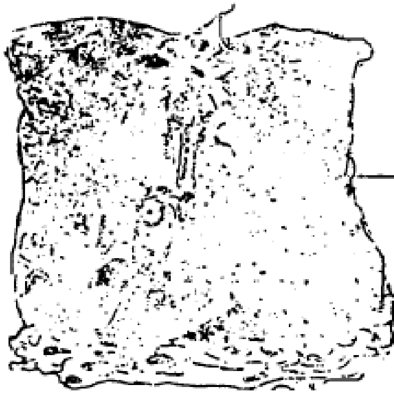


Fig. 36 Diagram of a vertical section through a taste bud (Best and Taylor).

The sense of taste lies at the tip and the side but especially in the posterior third of the upper surface of the tongue. The circumvallate papillae are about 8 to 10 in number and are placed in a v-shaped line at the back of the tongue. Each consists of an elevated tower with a central depression, and is surrounded by a circular moat. In the walls of this trench are the taste buds. From some papillae only one or two tastes are evoked, and from the others all four: as sweet, acid, bitter and salt. The fungiform papillae are at the sides and the tip. What are described as taste sensations are often a combination of this together with the sense of smell and of touch sensation.

The Buddhist teaching is that the sensitive part lies in the middle of the tongue in an area like the cut end of a lotus petal. The term *majjha* connotes either the middle in space or time, or midst. So that the back of the dorsum becomes also the middle, if the tongue be taken along with its root. This tongue sense is also compared to a dog which prefers a heap of ash in a village home to mats or cushions and where it feels safe from missiles. That might imply a pit or burrow.

The Seat of the Body Cognition (*Kāya Pasāda*)

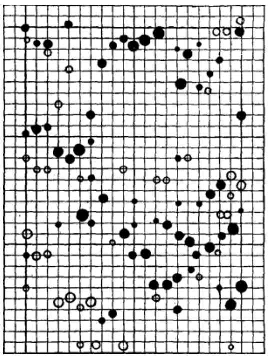


Fig. 37 Diagram of Heat and Cold Spots on back of Hand (Donaldson). The black dots represent cold spots, their size indicating the strength of the reaction; the circles represent hot spots.

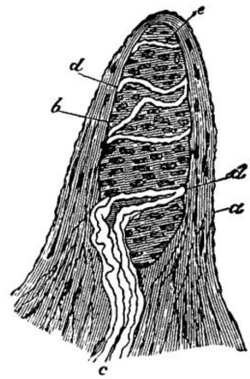


Fig. 38 Diagram of a touch corpuscle from the papilla of skin of hand (Klein and Noble Smith). The stalk consists of a nerve fiber (N).

The physiological teaching is that the surface of the skin is a mosaic of minute areas known as the touch or pressure spots, the heat spots, the cold spots and the pain spots, placed singly or in clusters. In any area one or other of these predominates. It is also said that while there are special centers for pain the excessive stimulation of other sensory faculties may produce a gross disturbance which is analyzed as pain. While there are special forms of end organs serving heat, cold, and pressure, those for pain have free nerve endings. Adrian, to whose researches we owe much of our knowledge on the subject, states that probably there are no hard and fast divisions into pain and touch endings. The superficial tactile impulses belong to the category of exteroceptive impulses in that they are concerned with stimuli from the outside world. There are also the deep

sensations from internal organs: of pressure, of the movement and the position of limbs, of pain in muscles and joints. These are also called the proprioceptive impulses.

In the Buddhist teaching the subjective field or base or receptor is an atom that is found all over the body, except at the base of the nails, and places where there is dead skin and where the nails and hair are not bound to skin. Like the other sensitive elements, it too is set in the midst of non-sensitive elements (*sasambhāra kāya*).

This body sense is compared to a jackal which hunts for its prey in open cemeteries wherein dead bodies lie scattered delighting in contact with animate matter. This is perhaps a reference to the punctiform distribution of the base.

This tactile object is regarded as being an external one (*bahiddha ārammaṇa*) or of being a personal or internal one (*ajjhattika ārammaṇa*). The tactile object is different from the other sense objects in that there are three primary elements (hardness, heat and motion) that take part in touch.

The impact of the objective field on the subjective field (*pasāda rūpa*) is thus that of the primary elements on a derived element and this impact is communicated to the *sasambhāra kāya* and experienced as pain or pleasure. In all the other senses it is that of derived element on derived element like cotton striking upon cotton and no pain is experienced. Hence, the sense cognitions or the elementary sensations are accompanied by indifference while the touch sensation is accompanied by pain or comfort.

Hence, on this teaching we can say that what the body experiences in touch are the extremes of hardness and softness, of heat and cold, and of vibrations and pressure. Pain and comfort are feelings or psychic states that are attendant on any of the above experiences. These sensations may be experienced intently or acutely as well as lightly.

The seat of the mind proper or the heart or mind-base element (*Hadaya Vatthu*)

We now come to the question as to whether we can give a location to the mind. While it would be improper to speak of a temporal relation or location of mind, we can conceive of a dependence relation. Short of an actual description of the nerve cell as the location, all the evidence seems to point to this conclusion. This evidence we shall now discuss.

1. It has been pointed out by Shwe Zan Aung in his *Compendium of Buddhist Philosophy* and by the Ven. Ñāṇatiloka in his *Guide through the Abhidhamma* that the Buddha has surprisingly not given the location of this mind-base in any of the canonical works.

While the seats or locations of the sense bases have been given, in the description of the mind base, the seat of the remaining seventy-nine thoughts, the definition only states "*yaṃ rūpaṃ nissāya manodhātu manoviññāna dhātu ca vattanti taṃ rūpaṃ manodhātuyā ca manoviññānadhātuya ca taṃ sampayuttakānaṃ—ca dhammānaṃ nissāyapaccena paccayo*"—"should the mind elements and the mind cognition element arise dependent on a material element, that element becomes a condition to the co-arisen elements and to the cognition elements that constitute the mind element and the mind cognition element in the manner of dependence."

The omission may well be for the reason that the Lord did not accept the popular belief at the time that the seat of the mind was in the heart, but saw it was in a place hitherto undescribed.

The commentator, however, describes it as being situated in the heart and to be in association with its blood.

The evidence both of a positive and a negative kind seems to be more in favour of it being the brain for the following reasons:—

2. The word '*hadaya*' means not only the physical organ known as the heart but is also used for the thought (*citta*).

3. Buddhist teachings are that thoughts arise dependent on the mind-base. The physiological teaching is that the mind is in some way related to the nervous system, of which the nerve cell is the unit. This hypothesis will account for several parallels in the two teachings. These are in respect of:—

(*a*) The nerve impulse with the intimating elements

In Buddhism the intimating elements are the two atoms born of thoughts that are described as being of a very fast nature, having a life duration of only a thought moment unlike the other atoms which are seventeen times slower. It is also described as spreading and so causing physical and vocal movement.

The physiology of the conduction of the nerve impulse accords with the simile of the drum. Imagine a person hitting with a stick one face of a two-faced drum that has straps connecting the two faces. On the rear face is pasted a piece of sugar candy on which a fly is sitting. The vibration that is imparted, first to the rear face of the drum, and then to this piece of candy causes the fly to fly off. Hitting the face of the drum, with stick is the impact of the object on the sensitive element of the eye, which is otherwise called the receptor. This sensitive element, one of the constituents of the atom called the eye decad, is in contact with the primary elements of the eye decad. The primary elements of the mind-base decad and the eye decad, like the two faces of the drum are in connection through the straps. The mind-base element which is the constituent of the mind-base decad is like the piece of sugar candy. The flight of the fly is like the disturbance of the life continuum stream that arises dependent on the mind-base.

Since mind and matter are interdependent and interacting, this makes it probable that the place where the

atoms born of thought (*cittaja rūpa*) are generated is the same as that in which the thoughts dependently arise. In physiology the nerve cell is stated to be the place where the impulses or messages are received, coordinated and then dispatched to other parts of the body along the nerve paths.

(*b*) The nervous system with base

In Buddhism the elements on which thoughts arise are put into the category of elements which serve as base (*vatthu rūpa*).

In science this close connection between the receptors and the brain to form one system has been demonstrated and the sensitive elements or receptors have been regarded as outgrowths of the brain. If one looks at the diagrams of the eye, one may see that the layer of rods and cones is the continuation of the optic nerve which is a prolongation of the brain.

(*c*) The receptors, the higher and lower centres with the three classes of thoughts

The mind or thoughts are of three classes: (1) the ten sense cognitions having their seats in the sense bases; (2) the three thoughts constituting the mind element; and (3) the seventy-six thoughts constituting the mind cognition elements; the latter two having their seats in the mind-base element.

That there should be two classes of thoughts, the mind element and the mind cognition element that are dependent on this base (*hadaya vatthu*) is in accord with the teaching as the higher centers situated in the brain; and the lower centers situated in the spinal cord and of the central nervous system. These centers ultimately refer to the nerve cells, in the different situations.

(*d*) The electrical recordings of the cortex with the continuous alternation between life continuum and thought process

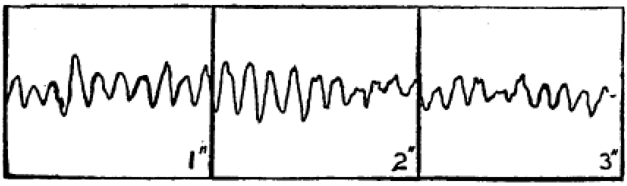


Fig. 39 Electroencephalogram record showing alpha rhythm (Thouless).

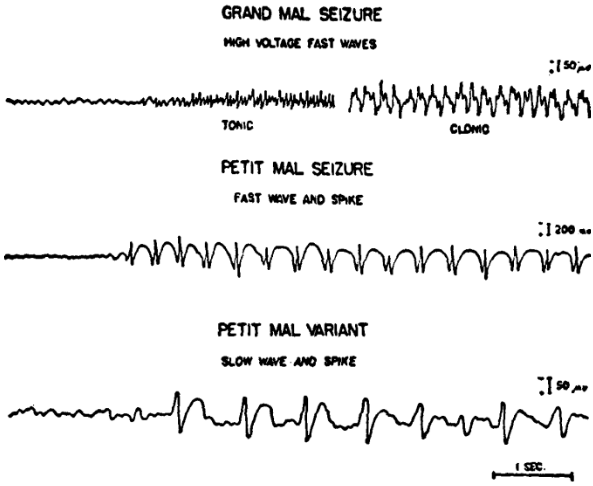


Fig. 40 Diagram showing electroencephalogram during an attack of epilepsy.

This proves the Buddhist contention that at no time is the mind a blank in that there are either thought processes or life continuum thoughts. No record, that shows some relation to thinking, has been taken from the heart.

(e) That Impulses for Respiration are nervous in origin with Respiration being (*Cittaja*).

These impulses may be influenced by impulses from the sensory nerves including the vagus, the nerve of supply to the lungs; or from chemical changes in the blood or from the higher cortical centers, otherwise the seat of volitional activity. But whatever the cause, they all act through some

nervous connection. This will also agree with the Buddhist teaching that respiration has only one origin, namely, thoughts (*cittaja*).

4. With the rebirth thought there arise three atoms called the sex, the body, and the mind-base decads. In the developed body, the body and the sex atoms are found all over the body. We may likewise expect the mind-base element to be found in more places than one. That would be true if we took the nerve cell to be the mind-base.

5. We also have the story of Vangisa Brahmin, who had the ability to say where a person had taken rebirth by tapping the skull of the dead man. Since the place of rebirth is largely determined by the kind of mental life, a person had while he was living, it is possible that the brain within the skull was the seat of the mind and the properties so acquired like some form of radiation were made use of in the art of Vangisa Brahmin.

6. That this conclusion is compatible with the explanation of the commentators that the mind-base is in association with the blood is the fact that the central nervous system is very sensitive to lack of oxygen and nutriment; and if temporarily deprived of them it will fail to recover unless the supply is speedily resumed. This may be proved by pressing on the carotid arteries and observing the sensation of faintness.

With this identification we shall have given to science the missing factor in the establishment of the body-mind relation. A loss that had caused science to resort to vague terms as analyzers (see next section on the Stimulus-Response Mechanism.)

B. THE STIMULUS—RESPONSE MECHANISM

I. The Physiological Conception

The body is composed of a number of organs which can be grouped as a number of systems in that the activities of the constituent parts of the systems have a common goal. Thus the heart and the blood vessels form the circulatory system, the kidneys, ureter, bladder, and urethra form the urinary system. Of these we are largely concerned with the nervous system. It is an extremely important one and we shall begin with it.

The Nervous System

A nervous system consists: (1) of different nerves which collect impulses or the excitory process which runs along a nerve when it is stimulated from the outside world. They are called exteroceptive impulses; and when from internal organs, namely, muscles, joints and labyrinth are called the proprioceptive impulses. These impulses are then transmitted to centers where they are coordinated; (2) of connecting fibers; and (3) of efferent nerves which distribute the impulses to the different parts of the body. It is also divided as the somatic system and the autonomic system, supplying the viscera of digestion and circulation. The unit of this system is the neuron or the nerve cell and its processes or fibers. By some of these nerve fibers the nerve cell receives messages and by others it sends out messages. The processes of one cell are in close contact with those of another cell at some places otherwise junctions. These junctions are called synapses. (See p. 295 *Fig*. 41)

To permit of the effective and economic interchange of impulses, certain nerve cells and fibers are collected into large masses called the brain and the spinal cord, otherwise the central nervous system. The rest are the peripheral nervous system.

The Impulse

The impulse in any nerve, whether in the optic nerve or auditory nerve, is identical. But the difference in the sensations as light or as sound is due to the presence of analyzers in the central nervous system. According to the law of specific nerve energies, every sense organ, however excited, electrically, mechanically, or chemically, gives rise to its specific sensation. The rate of setting up or the frequency of impulses depends on the strength of the stimulus. While there are special receptors for pain, excessive stimulation of other sensory impulses may produce pain. The character of the pain may be altered from many causes. They are called colicy, throbbing, stabbing.

The impulse is a self-propagated disturbance, i.e., the energy is got from the nerve over which it passes, like a train of gun-powder. Its velocity is about 100 meters per second. In this way it differs from an electric current in which the velocity is greater.

The Motor Path

Suppose one wishes to move his arm. The efferent impulse, starting in the cortical cells of the cerebral hemisphere, traverses the brain-stem, medulla, pons, and the spinal cord as the pyramidal fibers. These PF fibers then form synapses with the nerve cells (P.C.C.) of the cord. From here they connect with the anterior horn cells (A.C.C.) of the cord, which are the motor cells of the cord. The axons of these cells proceed uninterrupted and branch near their termination. Each branch ends in a muscle fiber itself and is called the motor end-plate. (See p. 295 *Fig*. 42) When an impulse arrives at this place a chemical substance (acetylcholine) is generated and this acts on the muscle fiber. During the passage of these impulses electrical, thermal and chemical changes take place in the nerve.

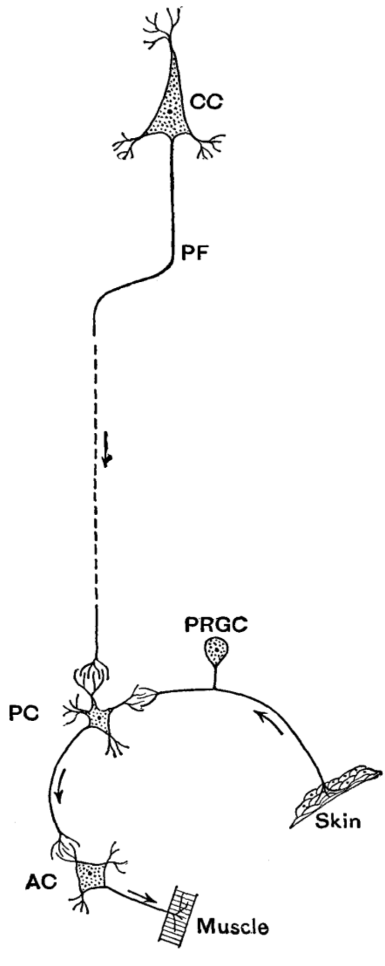
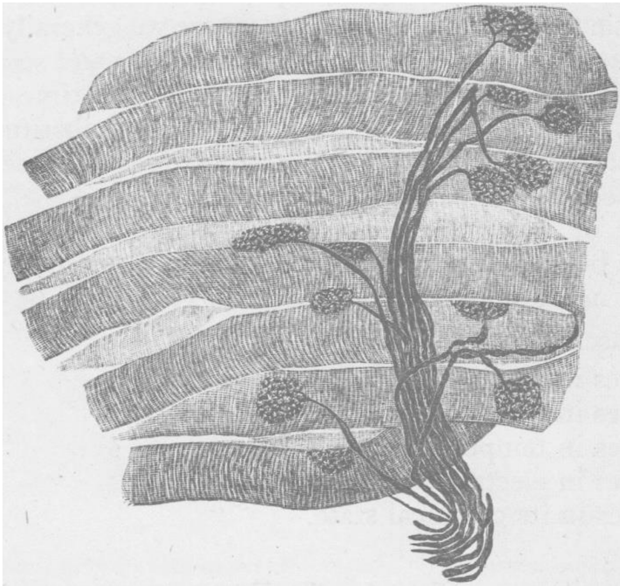


Fig. 41 Diagram of the Neuron of the Motor Path. CC, the cortical cell; PF, the pyramidal fiber; PCC, posterior horn cell, PRGC, poster root ganglion cell; ACC, anterior horn cell.

Fig. 42 (next page) Diagram of the motor end-plates. A nerve fiber branches two or three times and each branch goes to a muscle fiber and there breaks up into the final ramification as a rosette shaped structure.



The Sensory Path

The cell bodies of the first sensory neurons are situated in the posterior root ganglion of the spinal nerve or the corresponding sensory ganglion of the cranial nerve. The peripheral or afferent nerve or dendrites enters into relation with the sensory nerve endings or the specific receptors, each nerve fiber being in contact with many such nerve endings, sometimes hundreds. The sensory nerve endings or sensibility may be divided as somatic and visceral. The somatic may again be divided as the exteroceptive and as proprioceptive already described.

When the sensory impulses reach the cord they are carried further up by bundles of fibers known as the sensory tracts (see p. 306 *Fig*. 50).

Some of the impulses, such as the exteroceptive, reach consciousness; and others, such as the proprioceptive do not. Some of the impulses after ascending or descending end around cells of the same or opposite side of the body.

The Brain

The brain consists of three parts the fore brain, the mid brain and the hind brain. The fore brain contains the two cerebral hemispheres. It has grey matter on the outside and white matter on the inside. The grey matter forms the cerebral cortex. It contains the nerve cell and the nerve processes arranged in the form of several cell layers, each layer being attached to the one external and the one internal to it (see p. 298 *Fig*. 44).

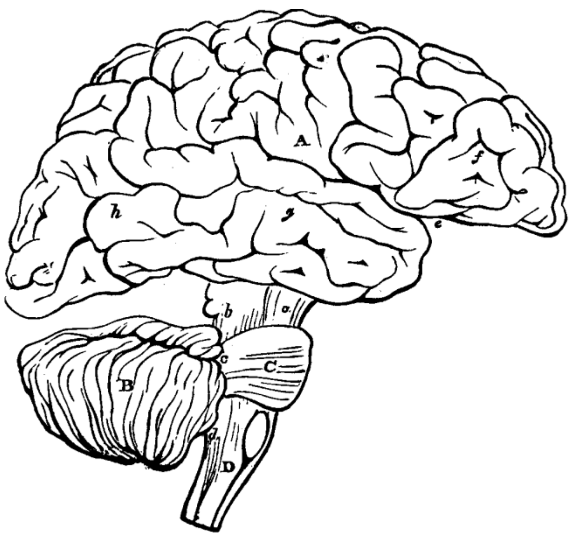


Fig. 43 Diagram of the brain of man. The parts are shown more separate than normal in order to show their connections. A, the cerebrum (fore brain); B, the cerebellum (hind brain); C, the pons; D, the medulla; a,b,c, peduncles. (From Quain).

Defects of development of the outer layers lead to various forms of dementia or degenerative mental changes and amentia or idiocies. The cortical cells must be regarded as the originators and the distributors of nervous impulses which travel to the reacting parts of the organism such as the muscles and glands.

The white matter contains the nerve fibers. These are of three kinds: the association fiber passing from convolution to convolution, (2) the commissural fiber linking up similar parts of each hemisphere, (3) the projection fiber which reaches from the brain to parts of the nervous system lower down. They may be sensory or motor. (See p. 299 *Fig*. 45 and p. 300 *Fig*. 46).

The cortex of the brain is in some way connected with certain functions of different parts of the body and several such areas motor and sensory have been mapped out (see p. 300 *Fig*. 47)

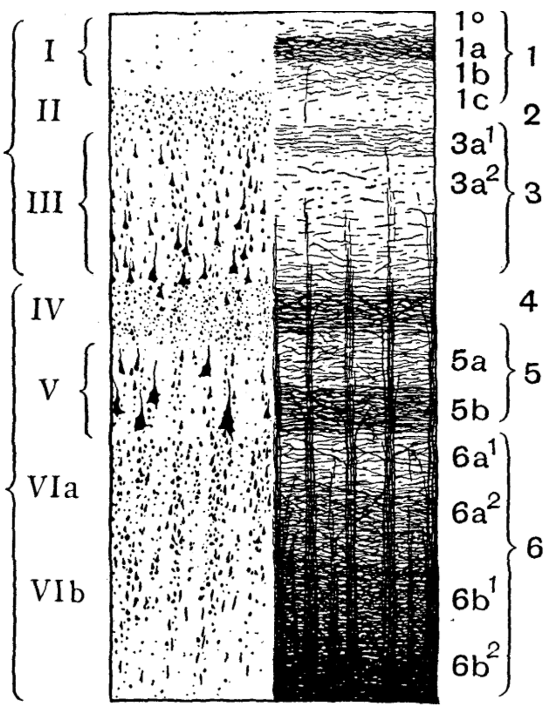


Fig. 44 Diagram showing the minute structure of the cortex, consisting of six layers. In the fifth layer are the giant cells of betz from which commence the pyramidal fiber.

There are thus areas which originate those impulses causing movement of various parts of the body and called the motor areas. There are also areas where various sense impressions are received. These are the sensory areas. Some of these latter are for differentiating weights and shapes of objects, for distinguishing colors, for hearing, for various intellectual functions such as memory, association of ideas, etc. In the region of another part (hypothalamus) are centers for the control of the emotions, body temperature, sleep, and other autonomic systems. If these centers are stimulated we get such conditions as rage, high temperature and sleep. Just as the field of vision is projected upon the actual retina, so the impulses from the retina are projected on an area of the occipital lobe. If these are damaged, blindness is the result. But these are not essential for life; and a dog in whom the major part of the cerebral hemisphere had been removed lived for 18 months although memory, emotions, and capacity to learn, were absent. Its reactions were entirely reflex.

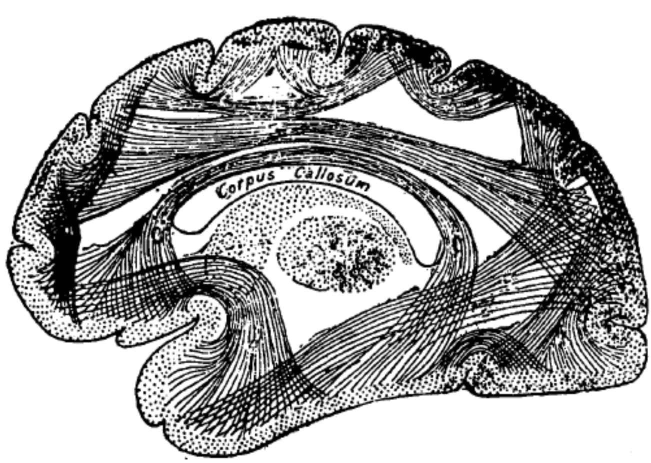


Fig. 45 Lateral view of hemisphere showing association fibers (Starr).

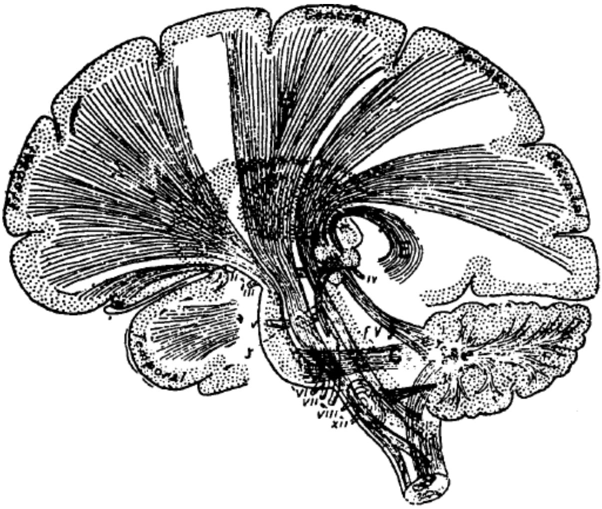


Fig. 46 Diagram showing the projection fiber within the brain (Starr). The fibers stretch from the cerebral cortex to the cerebellum, to the pons, medulla and also to the spinal cord.

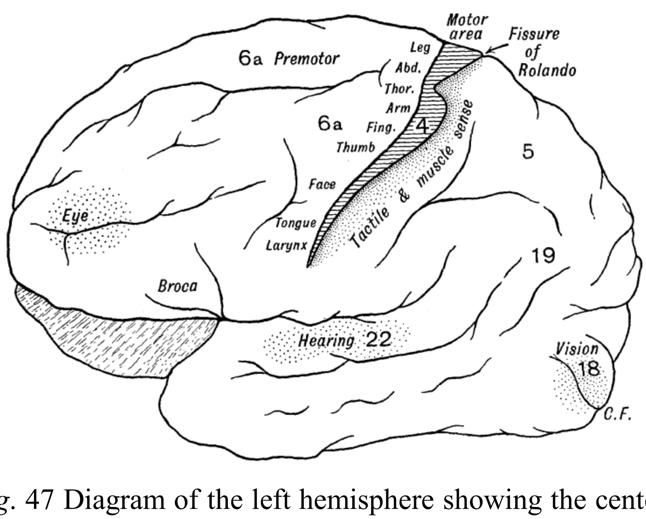


Fig. 47 Diagram of the left hemisphere showing the centers for hearing, vision, and touch and also certain motor areas as for legs, hands etc.

The mid brain includes such structures as the cerebral peduncles. They contain the fibers leaving or entering the cerebrum (*Fig*. 43).

The hind brain consists of the pons, medulla and the cerebellum. The cerebellum consists of a central lobe and two hemispheres. Like the cerebrum it has an external grey cortical area and an internal white matter. This, too, has the same three kinds of fibers, called the association, the commissural and the projection fibers it receives afferent impulses from the joints and muscles (proprioceptive fibers), and from the labyrinth and the cerebral cortex. It sends out impulses to the spinal cord and to the cerebrum. Its functions are the maintenance of the equilibrium of the body, receiving impulses from the muscles and joints, the co-ordination of muscular movement, and adjusting the tone of the muscles that are essential for the maintenance of posture. In the medulla and pons are centers for the control of respiration and circulation. The functions of these lower centers are normally held in check by impulses coming from the higher centers as those of the cerebral cortex.

Spinal Cord

The spinal cord (see p. 297 *Fig*. 43 and p. 302 *Fig*. 48) is a column of nerve substance connected above with the brain. It conducts impulses to the brain and from the brain, and also links together various levels of the cord. It consists of a white substance called the white matter on the outside and of a grey substance called the grey matter inside. The grey matter has three projections called the anterior and posterior and lateral horns (see p. 303 *Fig*. 49). From them arise two cords which join up to form the spinal nerve and are called the anterior and posterior roots. The anterior roots contain the efferent fibers or motor to the muscles and also fibers belonging to the autonomic system that controls the blood vessels, glands and viscera. The posterior root contains the afferent fibers which convey sensory

impressions such as the sense data of color, sound, etc., to the central nervous system.

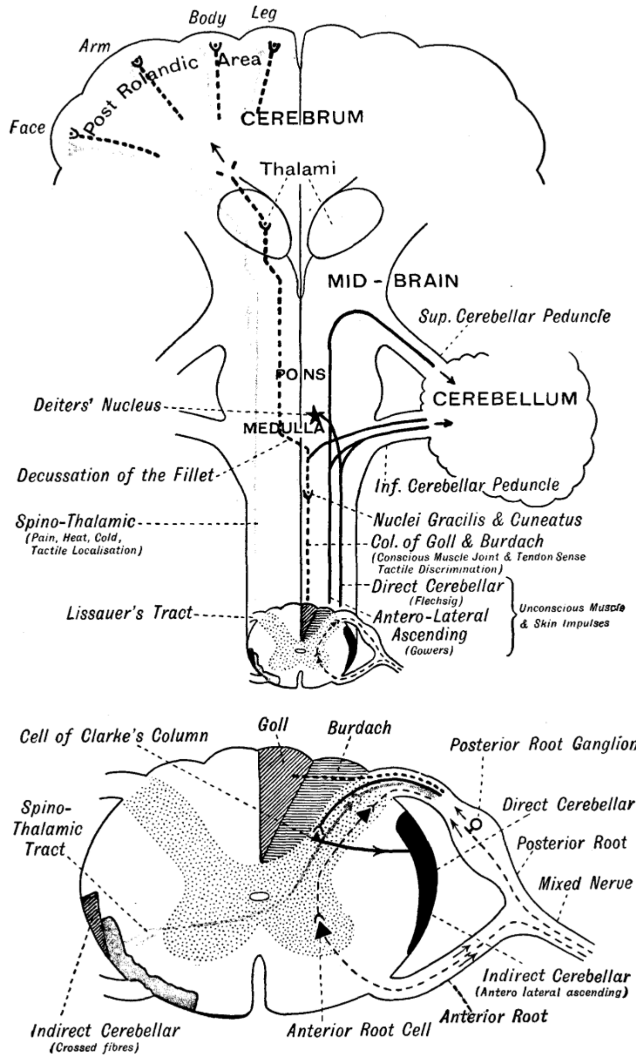


Fig. 48 Diagram of the main afferent paths of the central nervous system (McDowall).

The sensory impressions which are thus brought to the central nervous system may be relayed from there to cells in the brain along certain paths or tracts. There they are analyzed and returned as impulses or responses to volitions down other tracts to reach the anterior horn cells. From here the efferent fibers conduct the impulse to the proper muscles and glands described as the motor path (see p. 294); or they may not reach the brain but may link up with the anterior horn cells of the same or opposite side at the same or different levels of the cord. Because they do not reach consciousness and so cause conscious effort, they are called the reflexes.

The Autonomic Nervous System

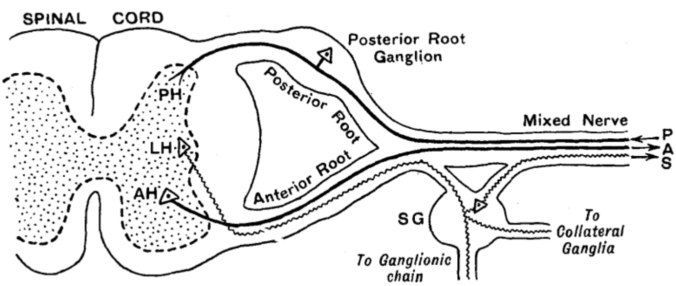


Fig. 49 Diagram of the Autonomic Path. AH, anterior horn cell; PH, posterior horn cell; LH, lateral horn cell.

Besides the somatic systems for voluntary and involuntary action that have been described, there is a third called the autonomic nervous system that is concerned with certain functions of the body, such as intestinal activities, of which we have no voluntary control. Yet it is a part of the general nervous system and cannot function as an entirely independent unit. It differs anatomically in having synapses in ganglia outside the central nervous system. It is an efferent system and consists of two parts called the sympathetic and the parasympathetic systems—most organs having both sets of nerves. The sympathetic nerves arise from the lateral horns and leave by the anterior roots. They

then join a chain of ganglia or collections of nerve cells on each side of the vertebral column. From there they are distributed to form various plexuses of nerves or to the spinal nerves. Those that travel with the spinal nerve are distributed to the blood vessels, sweat glands. Those that form the various plexuses are distributed to the thoracic viscera such as the heart, lung, to the abdominal and pelvic viscera such as the intestines, rectum, and bladder.

The parasympathetic fibers leave the central nervous system at three different levels, i.e., mid brain, medulla and the sacral region. The axons of these cells connect with ganglion cells within viscera, or in close relation to the innervated organ.

The functions of these systems are to govern the actions of parts over which there is no volitional control. They are the cardiac and involuntary muscles, of the digestive and sweat glands and of certain endocrine glands. It is not to be thought of as being outside the control of the centers of the central nervous system. They are partly under such control. Often their functions are of an opposed nature. Thus the sympathetic accelerates the heart and the parasympathetic slows the heart. The action of the system as a whole is partly direct and partly through the secretions of the ductless glands. These secretions like adrenalin enable the organism to meet changing situations.

The afferent fibers which carry the impulses to the central nervous system, from the external environment and from the viscera travel by way of the posterior root.

The stimulus for its activity may be a chemical change at the junction of the nerve endings in the muscle fiber or tension within itself. These muscle fibers are divided as being striped or unstriped. The striped ones are those which can be governed by our will, and hence, called voluntary muscles. The unstriped ones are not, and are hence, involuntary muscles. But nevertheless, all muscular tissue is controlled by the nervous system, the involuntary muscles

being controlled by the specialized part of the nervous system called the autonomic nervous system.

Movement

Besides the contraction and relaxation causing lengthening and shortening of muscles, as in stretching and bending of the arm, there is a form of this contraction and relaxation known as Peristalsis. It consists of a progressive wave of contraction followed by a wave of relaxation. By this means the contents of hollow tubes like urine and feces are kept moving. While the best stimulus for voluntary muscles is impulse, that for involuntary muscles is stretching.

The other forms of movement are segmental pendulum movements, and also pumping action. In respect of blood, the contents of the blood vessels are propelled not only by the pumping action of the Heart but also by the action of the muscular and elastic tissue in the blood vessels themselves.

Movement may be not in one direction only. Thus in nerves there are the nerve currents or impulses that are normally conducted in one direction—in efferent nerves *from*, and in afferent nerves *to*, the nerve centers—but conduction under certain conditions takes place in both directions.

Reflexes

Another form of stimulus-response mechanism is the reflex. It is an involuntary response to a stimulus by voluntary and also by involuntary muscle or gland. It consists of a receptor organ, an afferent path, one or more internuncinal connections, an efferent path and an effector organ. All these constitute the reflex arc. The reflex is elicited by a stimulus and the response is a muscular contraction, or a glandular secretion.

There are reflexes of the limbs and trunk such as the tendon reflexes. There are then the cutaneous reflexes such

as the plantar, gluteal, and superficial abdominal reflexes, and the postural reflex where the response is not of a brief contraction but of a sustained one.

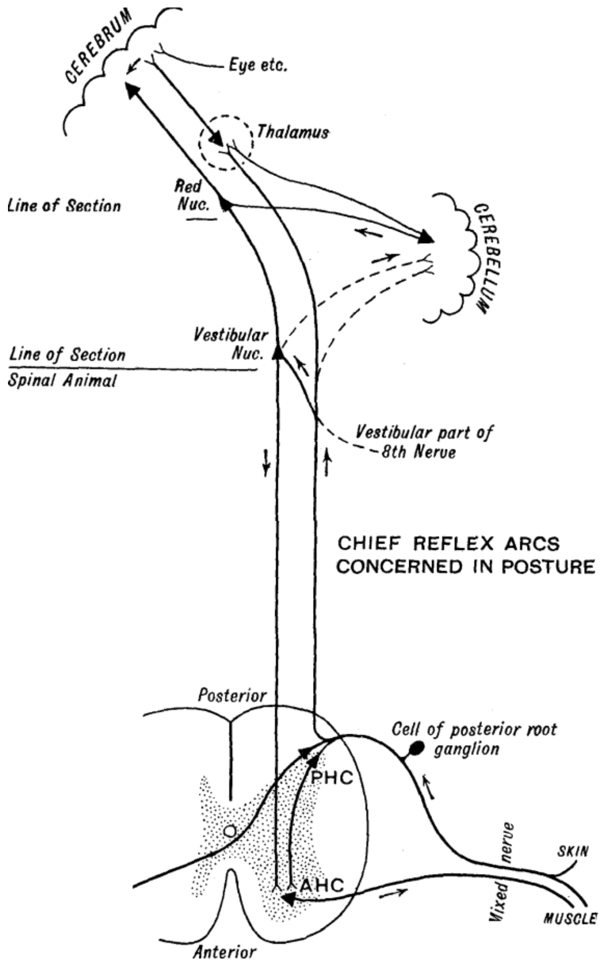


Fig. 50 Diagram to show the simple spinal reflex and its control by the higher centers (McDowall). The lower part shows a simple spinal arc and the upper part shows the arc responsible for its control by the higher centers.

Tendon reflexes—when a tendon is given a sharp tap or if a muscle is suddenly put on the stretch, a muscular contraction is evoked.

Plantar reflex—when the sole of the foot is stroked, there is flexion of the toes.

Normally these reflexes are kept inhibited by volition. On account of them the muscles of the body are normally not fully relaxed but are in a state of partial contraction that is called tonus.

There are reflexes that involve not only the peripheral nerves but the cranial nerves as well. Such are the pupillary reflex, and the corneal reflex.

Corneal reflex—when the cornea is touched the eyelids close.

Pupillary reflex—when the eyes are exposed to light the pupils contract.

Apart from the nervous system by means of which the living organism reacts to the external world, there are other systems by which it lives, keeps itself healthy and efficient, and grows. Without going into detail into these physiological studies, some mention should be made of them to show at least their relation to the working of the nervous system and of their interdependence and interaction.

Nervous Control of the Heart and Blood Vessels

Fibers from somewhere in the brain—which has not been located—pass down in the spinal cord, and from there the cardiac branches of the sympathetic travel to the cardiac plexus around the heart. There is a constant discharge of acceleration impulses by the sympathetic. They may be increased reflexively by many causes such as exercise. The vagus with its center in the medulla contains the parasympathetic nerves and functions to slow the heart. In the heart there is a spot called the pacemaker on which the

impulses act. It is the originator of the heart wave that travels round the heart.

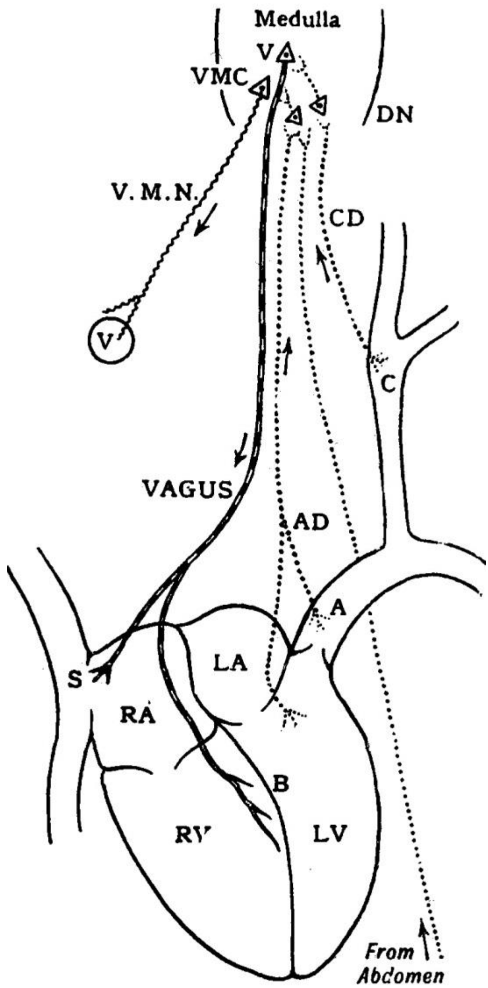


Fig. 51 Diagram to show the nerve supply to the heart (McDowall).

All the blood vessels of the body are under the control of a vasoconstrictor center in the brain, which causes constriction of the blood vessels; and a vasodilator center

which causes dilation. They lie in the medulla. If a section of the brain be made above these levels there is no immediate effect on the blood pressure, but if it be made below this region, there is a profound fall of blood pressure.

Lungs and Respiratory System

All the tissues in their combustion processes must take up oxygen and nutriment and get rid of carbon dioxide and other toxins. All this is possible on account of the blood circulation which transports the gases to and from the tissues in the different parts of the body. The intake of oxygen and the output of carbon dioxide occur in the lungs by means of respiration. This mechanism consists of an alternate expansion and contraction of the thorax called inspiration and expiration. These are secured by the contraction and relaxation of muscles of the thorax and abdomen. This pulmonary ventilation is controlled by three factors: the respiratory centers, the vagus nerve and the condition of the blood. The evidence is for the existence of two respiratory centers, i.e., one each for expiration and for inspiration. Each may be stimulated to produce inspiration or expiration. The chemical control is seen in the states of asphyxia and of altered metabolism. The nervous control is through sensory nerves from the skin or from the vagus, the nerve of the lungs, or from the higher centers. But ultimately it is the Respiratory center that controls it.

The Muscular System as the Effector

A muscle is a bundle of muscle fibers. Each muscle fiber consists of a contractile substance. During contractions the muscle becomes short and during relaxation it lengthens.

Chemical changes take place in muscle. During contraction, creatine phosphate is broken down into creatine, adenyl pyrophosphate to adenylic acid, and glycogen to lactic acid. During relaxation they are recovered in large measure.

II. The Buddhist Conception

The conditions for thoughts

Now thoughts arise only on account of the impact of the stimulus on the base or the sensitive element (*dvāra ārammaṇa ghaṭṭana*). For this occurrence, several conditions are necessary: (1) a stimulus or the thought object, (2) a suitable medium, (3) normality of the sense organ, and (4) the mind being in a state of attention. We shall see what is meant by them.

The Stimulus

It is of six kinds, namely, the five sense objects and the mental object. In four of the five sense objects, i.e., the visible, the auditory, the olfactory, and the sapid object only the color, the sound, the smell and the taste element becomes object and not other qualities of such objects. In the case of the tactile object three elements, namely, hardness, heat and motion constitute the touch stimulus. This sense object is also reckoned as being external (*bahiddhā ārammaṇa*) and as being internal (*ajjhattika ārammaṇa*) such as with muscular pain, joint pain, vascular pain.

It may differ in quality and in intensity. Thus we call objects as being; agreeable (*iṭṭha*), disagreeable (*aniṭṭha*), and neutral (*majjhatta*). In respect of intensity, it is strong (*balavataraṃ*) or weak (*dubbala*), and as the object of very great intensity (*ati-mahantārammaṇa*), of great intensity (*mahant-ārammaṇa*), of weak intensity (*paritt-ārammaṇa*), and of very weak intensity (*atiparitt-ārammaṇa*). The mental object cannot be seen or heard but only known. They are the five sensitive elements, the sixteen kinds of a subtle kind, of matter the cognition, and the non-cognitive elements, the *nibbāna* element and concepts. They can be grasped only in the mind avenue and by some thoughts that arise in them.

The Medium

The stimulus requires other aids (*upanissaya paccaya*) before it can stimulate the sensitive element. These are light for the visual object of color, space for the auditory object of sound, air for the olfactory object of smell, water for the sapid object of taste, and hardness (in one's body) for the tactile object of touch. With these aids the distant object can be grasped by the eye and the ear, in the case of the other stimuli, however, they must be brought into close contact.

The Sense Organ

The most important part of a sense organ is the sensitive element (*pasāda rūpa*). It is one of the constituents of the atoms called the decads. These decad atoms are set in the midst of tissues that are insensitive to color, sound, taste, and smell, but is sensitive to touch. The sensitive elements are born of past-action only, and may, on account of evil actions in the past, be absent from birth. They may be affected by bile, phlegm, toxins, etc., causing abnormality in the sensations. The five organs were described earlier.

The Awareness of the Mind

For thoughts to arise at the time of the impact of stimulus and the receptor element, the mind should either be in a state of awareness or been made so. This state in the case of a sense object or stimulus is the apprehending-at-the-five-senses thought and in the case of a mental object it is the apprehending-at-the-mind thought.

The Nature of the Impact

We have stated in describing the body cognition that the impact of stimulus on sensitive element in all the senses, except that of touch, is soft and is accompanied by the feeling of indifference. In touch the impact with a disagreeable object is experienced as pain; and with an agreeable object, it is experienced as comfort. We have also stated why it was so. See p.287.

Appendix

We shall now proceed to describe the occurrence of thought processes, the pathways of action, and local changes by which the response arises.

1. The Mechanism of the Pathways (*Dvāra*)

The term *dvāra* is used in two senses. In one it means the entry of an object into the mind; since that is on account of the impact of stimulus on the sensitive element, the sensitive element is taken as the pathway to the setting up of thought processes: first, in the sense avenue, and then, in the mind avenue. In the other, it means a pathway to physical and verbal action.

Pathways to Thought Processes

We cannot react to a sense object as to know it, to love, to hate and so on, except with thoughts. Physical impact and physical reaction to a Sense Object is one thing and mental impact and mental reaction is another. The Buddhist proposition is that it is on account of impact of stimulus on sensitive element or of subject and object that thoughts arise with the stimulus as the thought object. So that it is possible that changes in the object and in the thoughts we shall now proceed to describe what could have occurred between one moment and another. Thus the question whether the object exists apart from the thought which cognizes it presents no problem to Buddhists.

The material receptors are the sensitive elements and constitute the door to, or the set up of, thought processes in the sense avenues. The non-material receptor or the door leading to the occurrence of the thought processes in the mind avenue is the life continuum thought (arrest) that precedes the thought process in the mind avenue. The thoughts of this process, nevertheless, arise dependent or have their base in the heart or the mind-base element. The law that impact of subject and object is essential to occurrence of thoughts is explained in the case of the mental object as the impact of the mental factors (*dhammā yatana*)

on the cognition element (*manā yatana*) within its thought unit.

That there should be centers or areas in the brain whose function is the regulation of brain activity is in keeping with Buddhist teaching, based on the doctrine of *anatta*, that the living being is a self-regulating, inter-dependent body-mind mechanism. Just as in the case of the mind, a thought process such as the understanding of a name arises with its units working towards a goal or end, there can be similar concepts in matter. We have, for example, a description that the sensitive element (*pasāda rūpa*) within its atom (the decad) functions in a dominant way (*indriya bhāvena*). This dominance is explained as being like a minister of a department who sees that matters in his purview are attended to without interfering with the work of other ministers. The king, however, exercises power over all ministers.

But of greater importance is the view that it is the stream of thoughts that initiates, regulates and causes the activity of the centers, rather than that the centers should have the sole control of our thoughts at all times. Events cannot be explained without taking both systems of mind and body into consideration.

Analyzers as Pseudo-Explanation

The postulation of analyzers by physiologists give special significance to the teachings on thought processes of buddhists by which mental and physical functions are kept distinct and vagueness and doubt are dispelled as to their workings (see order of thought processes). The place of analyzers is taken by a train of thoughts.

Pathways to Action and Other Physical Events

This is the second meaning attached to the term *dvāra*. We shall, therefore, next inquire as to what are the changes that are brought about by thoughts and how. These events are voluntary bodily and verbal action, involuntary actions,

maintenance of posture, output of glandular secretions, causation of bodily health and other changes.

Voluntary Bodily and Vocal Action

A thought, moral or immoral, can arise with a desire to do a particular deed, in a particular form and in a particular avenue. Thus with a thought to utter an untruth, a person may express it through the avenues of speech as a lie or he may express it through the body as to write it. The volitions of the thoughts in the impulsion stage of the thought process in the mind avenue generate atoms called the intimating elements (*viññatti rūpa*). They are so-called because they indicate to others what is occurring in one's own mind. They are of two kinds: one for the causation of bodily action (*kāya viññatti*) and the other for verbal action (*vacī viññatti*). These two differ in that in the former there is excess of the motion element and in the latter, excess of the hardness element. They are of very brief duration and very fast, being equal to the speed of thoughts. They are also described as being like the steering wheel which sets the direction.

Involuntary Action
Maintenance of Posture (*Iriyāpatha*)
and Control of Vital Processes

All thoughts except the sense cognitions generate atoms born of thoughts. In light sleep mental activity is irregular with longer periods of life continuum between thought processes. In deep sleep the life continuum state is the dominant feature. When one turns in his sleep, that is explained as being due to intimating atoms. From these we can infer that even in deep sleep the life continuum thoughts generate atoms that can keep the vital processes of heart and respiration working, and also that some involuntary movements are under the control of the brain. This control over actions could be both positive, or accelerating, as well as of an inhibitory kind.

The Significance of the Electroencephalogram

While on the subject of 'Pathways to action' there is a conclusion that has a bearing on the subject of the Electro-encephalogram. That is that the living being can never be without a thought and so is never without some form of brain activity. This is indicated by the waves of the different rhythms. When a person is awake and the mind is active, either with the eyes open or with the eyes closed, thought processes are occurring with short interruptions. When the person is in deep sleep or deep anaesthesia, the person has the stream of thoughts called the Life Continuum with a thought object, taken at the time of death in the past life, and called the Death Sign. Since this is a repetition of similar thoughts one would expect some regularity of the rhythm in deep sleep. Dreams are thought processes dependent on brain activity, generally not properly coordinated, and breaking up this Life Continuum State. We would expect this to be shown in the disturbance of the Berger and other rhythms.

Causation of Health

Of the atoms generated by thoughts, one has the alterable elements; and the intimating elements. This shows that health may be caused in two ways: (1) by a spreading system. Consequently when a person performs a difficult moral task he does not feel the fatigue it entails, (2) by a signaling system. This is described below as the Pathway freed mechanism

2. The Pathway-freed (*Advāra*) **Mechanism**

The Control of the Body through a Signaling System

The other method is an operation which effects instantaneous changes throughout the body by the mind, which is nonphysical and not limited by space and time, This causes good and healthy states with moral thoughts, and unhealthy states with immoral thoughts.

This explains why the color of the face instantaneously changes when a person gets angry, or becomes bright when he is pleased, or again how, in the state called superintellection, the body may be conditioned as to cause extreme hardness or extreme lightness. In this way we can account for some of the phenomena that are being investigated by science and classed as psycho-kinesis and psycho-somatics.

The Response

The Chemical Changes Induced in the Effector

Now how are we to understand physical changes resulting from the thought processes? During movement there is an alteration in the atoms so that there is an increase in the motion and the energy elements on lifting a part, and an increase of the solidity and the binding elements in bringing the part down. This is not different to the physiological teachings regarding the chemical changes in muscular contraction in which there is an alternation of the breaking down of chemicals in contraction and a reformation during relaxation.

C. BIOCHEMISTRY AND BIOPHYSICS

How are we to understand the Buddhist teachings on this body-mind mechanism? There are two ways in which a thing can be understood—namely, the study of its structure and of its function. In the classification of the disciplines the former is called anatomy and histology, and the latter is called physiology. In dealing with thoughts we saw that our classificatory system was based on structure as well as function, in respect of matter the method appeared to be similar.

This study of the invisible could also be made at the atomic level as in biochemistry and at the nuclear or subatomic level as in biophysics. In this way the emphasis

in each case is placed only on one aspect. But it should be borne in mind that the study as biochemistry or as biophysics is complete only when all are finally considered together. When seen thus, the Buddhist teaching, while touching on the visible or the anatomical aspect, is more concerned with the invisible or the atomic and the subatomic aspects. The reason is not far to seek, for the mission of the Buddha was not to teach science but deliverance. That had to be through the knowledge of the reality in things. But the difficulty thrown on the Buddha was that this could be done only on existing knowledge which was necessarily imperfect.

I. The Anatomical Teaching

Now in the meditation called the mindfulness on the parts of the body, (*kāyagatā sati*) which is mainly a tranquillity meditation, the body is divided into thirty-two parts. Twenty of these are solid and twelve are fluid—see section on "Base" in Chapter VI. The stanza begins: "*Aṭṭhī imasmiṃ kāye, kesā, lomā, nakkhā,*" which means "in this body are the head hairs, the body hairs, nails, etc". Each of these thirty-two parts are studied in respect of color, region in relation to a mid-point, the naval, the form or shape, the relation to other structures around it; and its distinctive feature in respect of the remaining parts of the body.

II. The Physiological Teaching

We have, in the Chapters on the Analysis and Synthesis of Matter, described the concept of atoms, their structure, their size, their life term, and their continuity. We have also described the nature of their constituents. These studies at the atomic and subatomic level may also be viewed as teachings in respect of chemical properties and changes and of physical properties and changes.

Study in Respect of Chemical Change

A living being is a mind and matter combination. Its numerous activities cannot be adequately explained on the

basis of one cause such as energy alone. Accordingly, in the Buddhist teaching, there are the atoms that are generated from four causes, and these are then shown to interact on one another as explained on p. 62, n. 1 and p. 145, n. 2.

Atoms Born of Energy

Matter as Forms of Energy and More

In Buddhism, energy is the great creator of the universe. When it is said, that in the world, outside the bodies of living beings, there are only atoms originated by energy, we are saying that all those substances classed as carbohydrates, fats, proteins, salts and minerals are, in their essence, different combinations of the primary elements and secondary elements. That is why they are convertible from one to the other. The difference may lie in the way the nuclear particles or the *rūpa dhātus* combine and in their quantities, but their origin is the same, namely, energy.

This corresponds to the actions called reflexes by physiologists, involving somatic muscles, viscera, and glands that are carried out without voluntary control. We also say that there are actions done with the atoms born of energy. Some of these actions may be brought under the control of the mind through atoms born of thought.

Atoms Born of Nutriment

There is a difference between the bodies of living beings and the external world of plants and minerals. That is in regard to that particle called nutriment (*oja*). Now, this element enters into the composition of every form of matter, but it is active and generates other atoms by acting upon existing atoms, only in living beings. It is not that conceived in science as molecules having many forms such as fats, carbohydrates and proteins, but some principle in the atom, not yet understood, but present in them all.

This nutriment is described as being carried along hundreds of vessels in the body and there generating those

atoms for vitalizing it. Nutriment has to be supplied to all beings in the heavens and on earth, but its quality differs in different kinds of foods. One of the conditions to the long life of beings is the availability of this nutriment. When we speak of proteins of high quality and low quality, it may be that we are speaking of this nutriment principle.

Atoms Born of Thought

These are of a subtle kind and are present in every constituent of the body that is solid and living, with the exception of excrement, and in every fluid inside it, with the exception of urine, pus, and digestive juices.

There are thus: atoms causing a sense of well-being and of ill-health, and atoms causing impulses for maintenance of posture, flow of glandular secretions and for volitional action that are born of thought.

The Many Ways in which the Mind Influences the Body

In its many forms, as described on p. 173 n. 2, these atoms provide an explanation of many events which are imperfectly understood in science. Such are: health, the nerve impulse, ideo-motor action, psycho-somatics, faith-healing, electroencephalography. They explain the powers of mystics and religious devotees in such manifestations as: halo, levitation, and fire-walking.

Atoms Born of Past-Action.

How a Living Being Differs from Inanimate Matter

The fourth kind of atom, on account of cause, is the atom born of past-action. These are present in every solid constituent of the body, except feces; and in every fluid constituent of the body except pus urine, sweat, snot, tears and spittle. It is also on account of some of them that thoughts arise. Of these thoughts, the sensations arise dependent on the sensitive elements (*pasāda rūpa*), and the remaining thoughts arise dependent on the mind-base or heart element (*hadaya rūpa*).

The postulation of these atoms born of past-action while showing how mind and matter can exist as distinct entities, as asserted in the theory of parallelism, explain how matter influences the mind in such ways, as by external object or by diet. It also explains congenital defects as of vision, hearing, or why life cannot be prolonged indefinitely.

Besides such atoms born of past-action, on account of which thoughts arise there is the life nonad (*jīvita navaka kalāpa*). The life of a living being is dependent on the arising of these atoms born of past-action containing this life element. If these atoms do not continue to arise death results.

In the west, the understanding of a living being as consisting of interdependent and interacting mind and matter has resulted in the postulation of an '*elan vital*'. Buddhists, however, call it 'volition of the-past' or *kamma*, a known factor that plays so large a part in our daily life. Accordingly, this view that atoms born of past-action will not arise after the power of the *kamma* that gave life is spent, also explains why certain illnesses are unaccountably fatal.

The teachings on the sex atoms enables us to account for sex, changes in sex, and the occasional combination of the sexes in the same person.

Living beings are thus conditioned phenomena but are not mere machines.

Now these atoms born from the above four causes: past-action, energy, thought, and nutriment, do not work in isolation as to produce atoms of only that class, but act on one another. Thus we get an atom born of nutriment out of an atom born of energy. The body acts as a whole, and when one kind of atom is affected, the others are affected. So that if one kind is weak, however strong the others, the result is weak to that extent, like a harvest depending on the fertility of the soil, the seed, the rain occurring at the proper

time, and the intelligence of the farmer. In the same way, if kamma be strong, yet if the other conditions such as environment, food, and times be bad, the effects are not so good.

Study in Respect of Physical Change

We also described the elements, as causing certain physical properties; or where they were of a subtle kind, as carrying out certain functions. Thus the element of solidity (*paṭhavi*) when abundant, is the cause of hardness, and when few of softness.

Likewise when the element of cohesion is abundant, there is compactness or form, and when few, there is flow or fluidity; when the element of energy is abundant there is heat, and when few there is cold; and when the element of motion is abundant, there is vibration, when few, there is rigidity.

The element of life, which being subtle is indemonstrable, has the function of causing the continuity of the body or life.

We are told that the Ven. Sridhamma of the Maha Visuddharama, was wont to teach his pupils a stanza to be reflected upon. This is based on the teachings on the insight meditations to be found in the sacred books. We shall give only the English translation of it here:—

1. In this body of mine there are five kinds of bodies: the solid body (*paṭhavi kāya*), the fluid body (*āpo kāya*), the body of heat (*tejo kāya*), the body of movement (*vāyo kāya*) and the psychic body (*viññāna kāya*).
2. Of these five kinds of bodies what is that called the solid body? The head hairs, the body hairs, the nails, the teeth the skin, the muscles, the sinews, the bones, the bone marrow, the kidneys, the heart, the liver, the membranes, the spleen, the lungs, the intestines, the mesentery, the

undigested food, the feces and the brain. The twenty parts, twenty kinds are called the solid body.

3. What is the fluid body? The bile, the mucus, the pus, the blood, the sweat, the fat, the tears, the oil of the body, the spittle, the snot, the synovial fluid and the urine. The twelve parts, twelve kinds are called the fluid body.

4. What is called the body of energy? The body temperature, inflammation thermal energy or thermal energy (*santāpa tejo*), that inducing an inflammation and burning sensation (*dāha tejo*), the chemical energy in the digestive processes (*pācaka tejo*), the energy causing maturation and ageing of the body (*jirana tejo*). These kinds are called the body of energy.

5. What is called the body of movement? The peristalsis or movement upwards (*uddhaṅgama vāyo*), the movement downwards (*adhogama vāyo*), the intestinal movement (*kucchisa vāyo*), the movement in the mesentery (*koṭṭhāsa vāyo*), the movement of the body parts, great and small (*aṅga maṅgānu sāri vāyo*), and the movement in respiration (*assāsa passāsa vāyo*). These six kinds are called the body of movement.

6. What is called the psychic body? The knowledge in association with the eye or the eye cognition, the ear cognition, the nose cognition, the tongue cognition the body cognition and knowledge in association with the mind-base or the mind cognition. These six kinds are called the psychic body.

The first five are concerning matter, the last is concerning mind.

Thus the study of a living being as chemical and physical change is not something new in the world. Their importance for religion is their bearing on the generalizations called the Four Noble Truths. Then they change our whole attitude to the world. In the next section we shall turn to that.

D. SCIENTIFIC PHILOSOPHY

The Generalizations

Continuing from where we left off by way of analysis of the previous section the stanza proceeds:

(*a*) Of the twenty kinds that have solidity in excess or the solid body.

7. In this solid body or mass of the head hairs the property of hardness is the hardness element (*paṭhavi dhātu*); the property of binding or cohesion is the fluid element (*āpo dhātu*); the property of heat or cold is the energy element (*tejo dhātu*); the property of rigidity or vibration is the wind element (*vāyo dhātu*). Colour, smell, taste and nutriment are the derived or secondary elements that are dependent on the primary elements. All these physical elements because they have to be constantly prepared or renewed are *sankhata*; because they are arisen from cause are *paṭicca samuppanna*; because there is no living being therein are *nissatva*; because there is no soul are *nijjīva*; because there is an absence or void of an entity are *tuccha*; because there is no permanence, happiness, wholesomeness or self are empty (*suñña*); because they proceed to waning are *khaya*; because there is destruction are *vaya*; because they are not such as to take attachment are *virāga*; because they proceed to ceasing are *nirodha*; because there is wasting are *anicca*; because fear should arise in them are *dukkha*; because they are without core or substance are *anattā*.

8. In the same way in respect of each of the remaining nineteen masses of the body hairs, of the nails and so on.

(*b*) Of the twelve kinds that have fluidity in excess or the fluid body.

9. In this fluid body or the mass of bile the property of hardness is the hardness element. The rest, as in # 7.

10. In the same way in respect of each of the remaining eleven masses of the fluid body, of mucus, of pus, etc.

(*c*) Of the four kinds that have energy in excess or the body of energy.

11. In the body of energy or the mass of the body temperature, the property of hardness is in the hardness element. The rest, as in # 7.

12. In the same way in respect of each of the remaining three masses as the mass inducing inflammation and the sensation of burning, etc.

(*d*) Of the six kinds that have motion in excess or the body of movement.

13. In the body of movement in the mass of upward motion of the body the property of hardness is in the hardness element. The rest, as in # 7.

14. In the same way in respect of each of the remaining five masses as such the mass with the downward motion of the body, etc.

(*e*) Of the six kinds of thoughts or cognitions or the psychic body.

15. In the psychic body or the mass of the knowings in connection with sight called eye cognition, there are four masses: the mass of feelings, the mass of notings, the mass of formations, and the mass of knowings. The volition, preparation, is the mass of formations. The knowings of the object is called the mass of cognitions. That which tastes the flavor of the object is the mass of feelings. the recognition of the object is the mass of notings. All these elements, because they are prepared, are *sankhata*. The rest, as in # 7.

16. In the same way in respect of each of the remaining five masses of cognitions such as the mass of the ear cognition etc.

17. Thus in this body of mine, there are these forty-eight divisions. They are called elements (*dhātu*), because they bear their own nature. Such changing natures are called dhamma, because they are reals. These forty-eight divisions of the body, are prepared, arisen from cause, are without being, without soul, void of entity, unsubstantial, are changing, not fit to take attachment in, are ill and without self.

This insight wisdom lights up his whole cognitive being to cause the advent of the supramundane states.

A Comparison between Speculative, Scientific and Buddhist Philosophies

BERTRAND RUSSELL in *History of Western Philosophy* says that philosophical conceptions are a product of two factors: one, inherited religious and ethical conceptions; the other called the scientific. Seen thus, Buddhism is a combination of both speculative and scientific philosophy. It advocates the scientific method and pursues that to a finality that may be called the rationalistic. In it, are to be found answers to such questions of interest as: "What are mind and matter? Of them which is of greater importance? Is the universe moving towards a goal? What is man's position? Is there a living that is noble?" It takes up where science cannot lead because of the limitations of the latter's physical instruments. Its conquests are those of the mind.

It is like a speculative philosophy in that:—

1. Here is a search for certainty, though it may be found only at a very late stage, i.e., at enlightenment or supramundane state. At mundane level there is no certainty. There is only high probability. Thus the Buddha said of King Ajātasattu that he had the ability to become an *arahant* but for his bad association with Devadatta. Although the outcome is uncertain yet the natural laws are operating.

Doubt has its respected place in Buddhism and is abandoned only in the *sotapanna* state. Then he experiences an assurance that he will one day come to know the unknown (*anaññātaññassāmitindriya*), which he does at the enlightenment of the *arahant* (*aññatāvindriya*). This knowledge or certainty of a buddha is still more extensive and covers every field of knowledge. Hence, He is all-knowing (*sabbaññu*). The Buddha declares in the *Majjhima Nikāya*: "The *Tathāgatha*, Vaccha, is free from all theories." What he says is from experiential knowledge and may be verified wherever possible. It is from such knowledge that He has given the profound analysis of mind and matter. Even in Buddha's day he was given the name of the great analyzer (*vibhajja vādin*). Accordingly in Buddhism, we learn how to live without certainty and yet without hesitation.

2. Here are moral directives though there is no authority from which they issue. These moral directives are based on an ethico-cognitive integration. That virtue was knowledge was taught by the Buddha before Plato and Socrates. In the *Sona Danda Sutta,* He says, "Wisdom is purified by virtue and virtue is purified by wisdom. Should a person have wisdom he has virtue, should he have virtue he has wisdom. Virtue and wisdom are the greatest acquisitions in the world".

   The ethics in Buddhism follow a logical order. As with geometry, there are generalizations or the axioms. Dependent on them, arise the ethical rules, or the theorems. These rules when applied to life yield results that are verifiable. Thus, what is called evil (*akusala*) causes nervous tension, destroys peace of mind, brings the doer pain and suffering, a bad reputation, is destructive of morality, and can be tested if one is a little introspective. At death, evil causes a rebirth of a low level of life. There seems to be mounting experimental evidence of rebirth by "age regression" under hypnosis

and also of spontaneous evidence. This, however, being a subject in itself, cannot be adequately dealt with here. The role of the Buddha is not that of a law-giver but of a scientist who states facts about a thing in terms of cause and effect. As in the cognitive field, in the ethical field, too, the process of personal discovery is of a gradual nature. As a person understands, so he acts, and as he acts his understanding grows. Finally, in the insight meditations, the proof is found.

We seek moral guidance of some sort. Otherwise, there is utter chaos in society. Buddhist ethics, being based on cognitive knowledge is, therefore, invaluable. There are no rituals; only intelligent and unintelligent actions. (See p. 79 n. 3, p. 88 ff., for a definition of morality). These practices are for the good of both the individual and the society of which he is a member, and hence, are accompanied by an impulse of duty or what ought to be done. Pleasure, though often accompanying the idea of duty done, is subordinate.

In respect of ethics as ends and means, the Buddhist teaching is that the end is superior to the means, yet the means are equally important and may call for the rejection of the end. This is because the end and the means are both cognitive knowledge.

3. The answers to the various items of inquiry (see pp. 48–50) all fit into a philosophical system, and hence, Buddhism is rationalistic. This system hinges around the Four Noble Truths.

It is like a scientific philosophy in that:—

1. It advocates the empirical approach. The first thing it does in understanding reality is an analysis of language. It distinguishes between names and symbols (*sammuti sacca*) from reals; (*paramattha sacca*), and shows how meaningless names may be combined with the meaningful. The description of the reals, or the things in

themselves, is given only as a help to the ultimate realization of their nature by each one for himself.

2. There is a method for the attainment of this end. This is the pursuit of virtue and wisdom by the development of the Noble Eightfold Path, and especially of right concentration, i.e., of the mind or the thought processes of the mind avenues by the practice of the meditations. This is not some secret teaching, for the instructions are available to all. If the western world has neglected this, it is not the fault of the Buddha. Physical instruments, of whatever precision, will have their limitations, but not so the trained mind. In the use of this faculty, reason or judgment and observation have a vital role to play. Thus in the four establishments of mindfulness, his experiences of heat and cold or hardness in the meditation is tested against his sense experience of them, and he understands phenomena in a different way. On developing concentration, he gets a calming of the mind along with a developed reasoning faculty that is called *sampajañña*. If he now develops the tranquility meditations, he gets a calmness, a suppression of the gross evils and the beginning of a higher wisdom. If he develops insight wisdom, he becomes enabled to understand causality, finality, generality and the truths. In this way he overcomes the limitations of the senses which can never know reality.

3. Buddhism has many generalizations and generalizations are explanations. Thus events which have been reduced to the elements (*dhātus*), the masses (*khandhas*), the fields (*āyatanas*), the truths (*saccas*) occur under the five natural laws. In other words, there is world order according to the laws of ethics, thought, energy, heredity and phenomenology. Within these major laws are minor laws. These laws are not prescriptive, i.e., given by a higher authority such as god (see "Views on God" pp. 243–244). In Buddhism there are no anthropomorphic explanations like God or gods, or flights of fancy such as

soul. Thus Buddhism avoids what scientists call the pseudo-explanation.

4. Like Science, Buddhist teachings are based on causality. Any event is determined by a set of conditions. But this causality or cause-effect relation is not conceived as something that pastes together a cause and an effect. This causality allows freedom of thought and action. It is of three kinds: (1) a past-present relation (*purejāta*); (2) a present-present relation or simultaneity (*sahajāta*); (3) a future-present relation (*pacchājāta*); the last relation bringing Aristotle's finality and teleology into causality.

   Causality has been treated as the many-to-one and the one-to-many relations. This may be seen in the laws of the *paṭṭhāna*. Further, causal relationships do not determine events uniquely. They make possible only a one-to many and a many-to-one correspondence between cause and effect. Except for the five gross evils (*pañcānantariya kamma*), one cannot say precisely where rebirth will occur; the effect is limited to a range of possibilities.

5. Developing the problem: the Buddha in his efforts to solve the problem of life, did not speculate on an origin, but used the method of analysis in the practices called the establishments of mindfulness (*satipaṭṭhānas*). There he discovered the ultimate constituents (*dhātus*) of mind and matter and of their causality and their momentariness. These ultimates, He said, existed in combination and were called atoms of mind (*samputta dhamma*) and physical atoms (*rūpa kalāpas*). The thought units arose in dependence on some physical atoms (*kammaja rūpa kalāpa*). They could also generate some kinds of matter. This enables us to understand the interaction of mind and matter, and thereby explain phenomena such as psycho-somatics, extra sensory phenomena and ideo-motor action.

(*a*) Are there atoms? As to the problem whether the elements were particles or waves, we have a similar teaching as the directly conditioned and the indirectly conditioned elements. But the view taken in its philosophy is that both mind and matter are only functions or energies.

(*b*) Evolution: The subject of evolution is a matter of great importance and is inherent in the teachings. Buddhists distinguish between the individual and the species. The evolution of the individual may occur through successive stages from animal to brahma and finally to mergence with the infinite. The reverse process may also occur. So also does the universe undergo change, until it is finally destroyed. However, consistent with its teaching of a universe that is without beginning, there is a reformation after the destruction.

Though there is no specific teaching on the evolution of species, that i am aware of, yet such a theory is not inconsistent with our teachings. Matter, it says, have as conditions: past-action, thoughts, energy and nutriment. Alterations in these conditions will cause changes in the atoms generated by these agencies. The factors of energy, or heat, and food in the causation of mutations of the species is the theme of the scientists. The introduction of past action and thoughts means the reckoning of volitions, i.e., of psychological factors, in the struggle for existence. Intelligence and special abilities will obviously topple the balance in favor of the animal that resorts to these.

(*c*) Life after death: The accumulation of scientific evidence is in favor of it, proving the case for Buddhism.

(*d*) Mind as the dominant force: It was only on this basis that ideo-motor action, psycho-somatics or psycho-kinesis could be explained.

6. Epistemology: Philosophy includes metaphysics, or ontology and epistemology, as well as logic, ethics and aesthetics. Buddhism has, from its standpoint, something to teach on all these.

Metaphysics also means explanations of ultimate reality transcending the inadequacies or inaccuracies of ordinary thought.

Epistemology is the theory of knowledge and of truth. It includes logic and psychology. In Buddhist teaching, there are two sources of knowledge, the inference (*anumāna*) and the experience (*paṭiveda* or *pratyaksha*). Evidence or testimony (*sruti*) is also a type of inference. Buddhism is a kind of empiricism in method, because it reckons experience as a source of knowledge. It should be remembered, however, that there are experiences other than the sensuous (*nirāmisa*). These are arisen from within and include the trance, the path and the insight wisdom. Hence it is, that *nibbāna* is described as above logic, to be comprehended only by the wise. While sensuous experience is liable to error (*vipallāsa*), psychic and non-sensuous experience may be rendered exact. The supramundane experience of the *arahant* is free from error because of its purity.

Logic is the science dealing with the principles of valid reasoning. It brings no fresh experience but clarifies what is. That may also be seen on various places in the teachings thus, in the analytical knowledge of the arahant, one division is in respect of grammar (*nirutti patisambhidā*). Another example is as the forms of predication. They are affirmative as *nicca* or permanence, negative, as *asubha* or unwholesome, absence, as *anattā* or absence of self, and indescribable, as *atakkāvacara* or not to be arrived at by logic. Yet again there are four kinds of questions: requiring the direct answer (*ekansa vyākaraṇīya*), the answer by analysis (*vibhajja vyākaraṇīya*), answer by a counter-

question (*paṭipuccha vyākaraṇīya*), and that should not be answered (*ṭhapaṇīya*). In the logical process of reasoning in regard to the Four Noble Truths, one may use both analytical and synthetical propositions. Although the realization of *nibbāna* was above logic, by resort to means other than logic, yet in its rational appeal Buddhism was based on logical reasoning. Thus, we find stories of great debaters who came to match their skill with the Buddha and his disciples.

Such is the balance of a comparison between a speculative, a scientific, and a Buddhist philosophy.

GLOSSARY

BUDDHIST TERMS

Abhidhamma—the special or highest teaching in respect of phenomena, in ways such as the elements, units, causal relations; and whose aim is to release the individual from illusions.

Abstinence mental factors (*virati cetasika*)—a common term for the three elements of right action, right speech and right livelihood that arise to avoid doing evil acts by way of body, speech and as means to livelihood.

Access concentration (*upacāra samādhi*)—a state of concentration or being absorbed in a moral object, prior to the advent of the trance thought itself.

Accentuating kamma (*upatthambhaka kamma*)—those forces which heighten the power of another act to enhance the effect.

Action becoming (*kamma bhava*)—the active side of the cause-effect relation, otherwise the volitional activities or formulations in moral and immoral deeds.

Action course (*kamma patha*)—an action of such intensity that it can cause rebirth effects.

Aesthetic pleasure (*hasituppāda*)—the thought with which an *arahant*, including the Buddha, smiles in response to subtle concepts. Also called the laughter-genesis thought.

Alterable elements (*vicāra rūpa*)—a common term for the three elements of buoyancy (*lahutā*), pliancy (*mudutā*), and efficiency (*kammaññatā*), causing those states of physical health.

Antagonistic kamma (*upapilaka kamma*)—those forces which weaken the power of another act to cause the diminution of the effect.

Apprehending (*āvajjana*)—the function of advertence or apprehending or being aware of the object. It is carried out by two thoughts, the apprehending-at-the-five-senses in the avenues of the five senses; and the apprehending-at-the-mind in the avenues of the mind.

Ascetic practices (*dhutaṅgas*)—practices for the rapid laying off of the defilements.

Asservation of truth (*sacca kiriya*)—an act of avowal of a truthful state of affairs that is performed in moments of despair.

Asynchronous kamma relation (*nānā khaṇika kamma paccayā*)—the successive influence by the volitions with which moral and immoral actions were done at various times in the past.

Attainment concentration (*appanā samādhi*)—the state of concentration at the moment of the descent of the trance thought.

Avenue-freed thoughts (*dvāra-vimutta cittas*)—the thoughts that occur at times of rebirth, life continuum, and death. The thought objects of them is one of the three death signs grasped in the terminal process of the previous life.

Base (*vatthu*)—the physical element dependent on which thought arises. These are the five sense receptors for the ten sense cognitions, and the mind-base for the remaining seventy-nine thoughts.

Becoming (*bhava*)—another name for formulating (*sankhāra*). Is of two kinds as action becoming (*kamma bhava*) and rebirth becoming (*upapatti bhava*), or the active and the passive aspects of an action.

Being (*bhava*)—the state of existence for a living being is of three kinds: the sensuous, the form and the formless.

Bodily intimating elements (*kāya viññatti rūpa*)—are atoms born of thought that are of briefer duration than the ordinary atom, and causing bodily movement.

Boredom (*thina middha*)—two mental factors causing the lazy states. They can occur only in the induced class of immoral thoughts.

Brahma virtues or illimitables (*brahma vihāra*)—a term for friendliness, pity, sympathetic joy and equanimity, when extended to cover all beings without distinction of friendliness and hostility, or likes and dislikes.

Cessation of thought (*nirodha samapatti*)—a trance state that is characterized by the absence of thoughts or atoms born of thought. Can occur only to non-returner, and the highest saints.

Concepts (*paññatti*)—the names or signs or symbols for things (*nāma paññatti*) and many attributes which are denoted by such names and symbols (*attha paññatti*). They exist as mental objects to some thoughts. Such objects have no temporal relations, and are not reals.

Conceptualized image (*patibhāga nimitta*)—is an event, a stage beyond the visualized image, in which the defects of the latter are absent.

Concentration (*samādhi*)—a state of being absorbed in a single moral object. Are of three kinds as preparatory (*parikamma*), near to trance but yet of the order of the sense plane (*upacāra*) and that of attainment or trance (*appaṇā*).

Connector, Pathway (*dvāra*)—the agency for the occurrence of bodily acts (*kāya dvāra*) and of verbal acts (*vāci d*vāra). The bodily intimating elements are the *kāya dvāra* and the verbal intimating elements are the *vāci dvāra*.

Continued roll of lives (*samsāra*)—the unbroken series of lives from beginninglessness wherein death is followed by birth.

Continuity (*sāntati*)—a series of mental or physical units of a similar kind and arising in quick succession until there is a change to those of a different kind.

Corruptors of insight (*vipassanā upakkilesa*)—certain experiences during insight meditations which can lead to false notions.

Death sign (*nimitta*)—the thought object for the rebirth, the life continuum and the death thoughts and for the terminal thoughts process in the preceding life. It is one of three kinds: the volitions at the time of the deed (*kamma*), some symbol of the deed (*kamma nimitta*) or some sign of the future destiny of the departing being (*gati nimitta*).

Defeat (*pārājikā*)—acts which if done by a monk will not enable him to achieve his ultimate object while still a monk.

Defilements (*kilesas*)—those natures that cause the mind which is clean at birth to be later defiled.

Density, compactness (*ghana*)—is that which renders it difficult to discern the reality in things. It is of four kinds: of wholeness (*samūha ghana*), of continuity (*santati ghana*), of function (*kriyā ghana*), and of object (*ārammaṇa ghana*).

Dependent origination (the law of *paṭicca samuppāda*)—an explanation of life as a process without beginning, where one event as cause yields another as effect, and which, in turn, becomes cause to another effect in respect of past, present, and future.

Determining thought (*voṭṭhapana citta*)—an inoperative thought that determines the object as to the true nature or otherwise, so that the thoughts of impulsion that follow will be moral or immoral accordingly. It is the apprehending-at-the-mind thought appearing in the sense avenues to perform a different function, namely, determining.

Dhamma—a word that has many meanings: religion, truth, things, phenomena, nature.

Directly conditioned elements (*nipphanna rūpa*)—the 18 physical elements whose genesis is directly due to the four causes: past-action, thoughts, energy, and nutriment.

Divine states (*brahma vihāras*)—see BRAHMA VIRTUES.

Ease (*sukha*)—a form of feeling that is associated with the body as a sense of physical comfort and as a form of happiness in the trance states.

Effects (*vipāka*)—effects of acts classified as those at times of rebirth (*paṭisandhi viññāna*), and those thereafter (*pavatti vipāka*).

Eight attainments (*aṭṭha samāpatti*)—a term for the continued trance state by those who have earlier experienced them. The eight states of trance, are the four (five by the *Abhidhamma* reckoning) of the form plane, and the four of the formless plane.

Enlightenment (*bodhi*)—a term for the wisdom at the moment of the path thought. By the term 'supreme enlightenment of the Buddha' is meant the all-knowing wisdom that arises after the attainment of the highest path (*arahatta magga*) thought on adverting to a subject.

Error (*vipallāsa*)—three erroneous functionings of the mind (of cognition, of noting and of opinion formation) in regard to each of four notions of permanence, wholesomeness, happiness and self.

Establishments of mindfulness (*satipaṭṭhānas*)—insight meditation practices of four kinds: on the body, on the feelings, on the thoughts and on phenomena.

False notions (*micchā saññā*)—illusions of permanence, wholesomeness, happiness, and self.

False view or illusion of a self (*sakkāya diṭṭhi*)—see ILLUSION OF SELF.

Fetters (*saṅyojanas*)—ten evil states that bind a being to *samsaric* existence.

Fields, Sense (*āyatanas*)—Thoughts arise by the impact of subject and object. The external or objective fields are the five sense objects and the mental object. The internal or subjective fields are the five sense receptors and the cognition element or thought.

Five faculties (*pañcendriya*)—a term in meditation procedure for the five mental states of confidence (*saddhā*), mindfulness (*sati*), effort (*viriya*), concentration (*samādhi*), and wisdom (*paññā*) that should be developed. When maintained in an equal degree they cause the advent of the trance by the suppression of the hindrances. These five faculties must be distinguished from the faculty relation (*indriya paccaya*).

Five-fold mass (*pañcakkhandha*)—a term for a living being, like the word 'personality'. By this it is implied that a being does not contain an immortal unchanging soul but is composed of a number of fleeting elements that can be put into five groups.

Five-fold superintellection (*pañcābhiññā*)—five abilities that are acquired on account of the attainment of a special form of the 5th trance of the form plane. They are divine sight (*dibba cakkhu*), divine hearing (*dibba sota*), reading others' thoughts (*paracitta vljānana*), remembering past lives (*pubbenivasanussati*) and various psychic powers (*iddhi vidha*).

Form trances (*rūpa jhāna*)—the five trance states in which the mind is absorbed in a mental object, of the class called concepts, in respect of material things and fulfilling the functions of trance.

Formations or formulations (*sankhāras*)—a term that expresses the act of formulating or getting the unit together by volition, as well as the state of having been formed as when mind and body are called *sankhāras*.

Formless trances (*arūpa jhānas*)—trance states in which the mind is absorbed in immaterial things that may be a concept or a real and fulfilling the functions of trance.

Foul states of the body (*asubhas*)—see TEN FOUL STATES.

Four meditations on divine states (*catu appamaññā*)—the meditations on love, compassion, sympathetic joy and equanimity in respect of all living beings without distinction of friend and foe.

Four great kings—*Deva* kings of the four quarters.

Fruition thoughts (*phala citta*)—the four conscious effects or resultants of the path, or moral supramundane thoughts.

Full understanding as the known (*nāta pariññā*)—a state of insight wisdom in which there is full understanding of the special characteristics of mental and physical phenomena.

Full understanding as the investigating (*tīrana pariññā*)—a state of insight wisdom in which the general characteristics of mental and physical phenomena are comprehended.

Full understanding as the abandoning (*pahāna pariññā*)—a state of insight wisdom in which the defilements are expelled.

Genetic kamma (*janaka kamma*)—act which causes birth.

Grasping (*gahana*)—conscious understanding, done by thought processes in many ways such: as grasping the name, grasping the meaning, grasping the sign, grasping the intention. Also as correct grasp of the object, wrong grasp of the object. This is different from grasping (*upādāna*).

Great (*mahā*)—a term applied to the moral, resultant and the inoperative thoughts of the sense plane with roots; so-called because their effects may be experienced in many worlds.

Great efforts (*mahappadhāna*)—four strivings: to suppress the risen evil, to prevent the arising of the unrisen evil, to arouse the unrisen moral and to develop the risen moral.

Gross elements (*olārika rūpa*)—the twelve elements, including the five sensitive elements and the seven stimulating elements.

Habitual kamma (*ācinna kamma*)—an act that is frequently indulged in.

Hindrances (*nivaranas*)—the five evil states of desiring in sense pleasures, hatred, restlessness-remorse, sloth-torpor and doubt that are a bar to spiritual progress and are suppressed powerfully in the meditations.

Hungry spirits (*petas*)—ghosts, many of whom are suffering pangs of hunger and thirst.

Ideas (*pāññatti*)—See CONCEPT.

Illimitables (*appamaññā bhāvanā*)—also known as the divine states. See BRAHMA VIHARAS.

Illusions (*vipallāsas*)—the distortions of objects due to faulty functioning of knowing (*citta vipallāsa*), noting (*saññā vipallāsa*), and of view formation (*diṭṭhi vipallāsa*), in respect of each of the four false notions of permanence, wholesomeness, happiness, and self in the mundane, making 12 illusions. See FALSE NOTIONS.

Illusions of a self (*sakkāya diṭṭhi*)—illusions of 20 kinds, according to whether view of self is related to one of the five masses of the being, *i.e.*, matter, feelings, notings, formations, and cognitions; and in respect of as being identical, external but belonging to, and as mass dependent on the self, and the self as dependent on the mass.

Image (*nimitta*)—a sign or symbol for an object of meditation. It is of three kinds: as the preparatory image (*parikamma nimitta*), the visualized image (*uggaha nimitta*), and the conceptualized image (*patibhāga nimitta*), also called the sign.

Impulsion (*javana*)—the powerful stage in a thought process in which voluntary action is possible and in this sense is described as the time of tasting the flavour of the object.

Indirectly caused elements (*anipphanna rūpa*)—certain properties of the atoms themselves and not of the elements constituting the atoms. The last mentioned are held to be directly caused. They are: space, the three alterable, the two intimating and the four phasic elements.

Ineffective phenomena (*abyākathā dhamrna*)—those elements which do not yield further effects as a result of their springing into existence. They include the ineffective thoughts, matter, and *nibbāna*.

Ineffective thoughts (*abyākathā cittas*)—the thoughts that do not yield further effects consequent to their arising. It is a term for the two kinds of thoughts, the resultant, and the inoperative.

Inferential knowledge (*anumāna buddhi*)—knowledge arrived at logically.

Initial genetic element (*upacaya rūpa*)—the birth-phase of the initial atoms of various orders of atoms.

Inoperative thoughts (*kriyā cittas*)—the thoughts that do not yield future effects and at the same time are not themselves the conscious effects of past actions.

Inseparable elements (*avinibbhoga rūpa*)—the physical elements which do not exist separately and are made up of the four primary elements of color, taste, smell, and nutriment.

Insight meditations (*vipassanā bhāvanā*)—the meditations leading to a development in the understanding of the essential nature of things, in respect of their individual and general characteristics.

Intimating elements (*viññātti rūpa*)—the very fast atoms that are born of thoughts and cause bodily and verbal action.

Judgment (*vimansa*)—another term for wisdom. It may become one of the dominating influences in action, (*adhipati dhammas*). Used also in the conventional sense for the final thought process.

Kamma—action, *i.e.*, of body (*kāya kamma*), of speech (*vaci kamma*), and of mind (*mano kamma*). In these actions it is the volition or *cetanā* in the moral or immoral thoughts that plays the dominant role.

Kamma sign—one of the death signs presenting itself at the time of death. It is the volitions of an act, as if the act was being done afresh.

Kamma relation—the active causal, conditioning by thought. It is two-fold as the synchronous or immediate *kamma* relation (*sahajāta kamma*) in the formulation of the thought unit and the matter generated by it; and as the asynchronous or successive *kamma* relation, in its ability to produce effects later on.

Kasina light (*kasina āloka*)—brilliant light coming through a visualised image, indicative of a state of suppression of the hindrances. This light can be extended in space.

Laughter-genesis thought (*hasituppāda*)—see AESTHETIC PLEASURE.

Lesser moment—third of the duration of a thought moment.

Lesser saints (*sekkha*)—saints still in training. See SAINTS.

Life (*bhava*)—existence of three kinds: sensuous existence (*kāma bhava*), form existence (*rūpa bhava*), formless existence (*arūpa bhava*).

Life continuum thought (*bhavaṅga citta*)—a thought, between two thought processes, existing with an object different from that of the thought process. It is so-called because it is a factor of existence.

Life nonad (*jīvita navaka*)—the atom with life as the ninth element, *i.e.*, the inseparable elements and life.

Life period (*pavatti kāla*)—the period of life of a being after the rebirth moment.

Material benefits of moral action (*ānisansa*)—possessions such as health, wealth, power and beauty, as well as the atoms born of past moral action.

Material ills of immoral action (*ādīnava*)—such features as ill-health, poverty, ugliness, lack of associates, etc., as well as the atoms born of past immoral action.

Mental object (*dhamma ārammaṇa*)—one of the five sensitive elements, the 16 kinds of subtle matter, the cognitive and the non-cognitive elements, *nibbāna* and concepts. This object can be grasped by only the mind cognition elements in the avenues of the mind.

Mind-base or heart element (*hadaya rūpa*)—see HEART ELEMENT.

Mind cognition element (*mano viññāna dhātu*)—the remaining 76 thoughts when the sense cognitions and the mind elements are left out.

Mind element (*mano dhātu*)—the three thoughts made up of the apprehending-at-the-five-senses, and the two recipient thoughts.

Mundane (*laukika*)—that which on account of being conditioned, bears characteristics such as momentariness or constant breakup, and renewal.

Neutral or dissimilar group of mental factors (*añña samāna cetasikas*)—a collective term for the seven universals and the six particulars. They arise regardless of the ethical nature of the thought.

Observance days (*uposatha*)—two of the four poya days of a month, namely, the days of the full moon and of the new moon. On these days the monks assemble in a hall or "chapterhouse", and recite the *pātimokkha*.

Octad (*aṭṭhaka*)—a unit of eight. If it exists by itself, it is called the pure octad (*suddhāṭṭhaka*).

One-analysis meditation (*ekavavaṭṭhāna*)—a meditation in which matter, of whatever place, origin, or kind, is reflected on as consisting of the primary elements.

One-perception meditation (*eka saññā*)—a meditation in which food in whatever place or stage of digestion is conceived of as being foul or loathsome.

One-pointedness of mind *(ekaggatā cetasika*)—a mental state in which the mind (cognition and mental factors) takes only one thought object, to the exclusion of all others.

Particular mental factors (*pakiṇṇaka cetasikas*)—the six elements that may arise irrespective of the ethical nature of the thought unit.

Path thoughts (*magga cittas*)—another term for the moral supramundane thoughts. So-called because they are like a path that is being opened up to *nibbāna* by the destruction of the defilements.

Pathway or the response-mechanism (*dvāra*)—either the mode of entry of the object to set up a train of thought, or the way by which thought leads to action. See CONNECTOR.

Patimokkha—the set of rules in the *Vinaya* which is binding on monks and should be recited on the observance (*uposatha*) days.

***Paṭṭhāna*, method of**—the method of analysis in the book of causal relations that deals with a plurality of causes.

Personality as temperament—of two kinds: deep (*gambhīra sabhā*) or shallow (*agambhira sabhā*).

Permanency view (*sassata diṭṭhi*)—the view that there is something permanent in life that goes on from life to life.

Phasic elements (*lakkhaṇa rūpa*)—the four elements belonging to the indirectly caused elements or some

properties of the atom itself. When the birth phase has been reckoned as two, being that of the initial atom and as that of the subsequent ones, the three periods of birth, staticity and death of a unit, becomes four phases.

Poya days (*uposatha*)—four days corresponding to the four phases of the moon.

Preparatory image (*parikamma nimitta*)—the object being attended to, at the preliminary stage of the meditation.

Preparatory thought (*parikamma citta*)—the first impulsion thought in the trance process. It has adjusting the individual to a sublime state as its function.

Primary elements (*mahā bhūta rūpa*)—the four physical elements which form the basic structure of all matter. They are: hardness (*paṭhavi*), cohesion (*āpo*), energy (*tejo*), and motion (*vāyo*).

Proximate cause (*padaṭṭhāna*)—immediate cause of an event.

Pure octad (*suddhaṭṭhaka*)—the atom that contains only the eight inseparable elements.

Pursuer of the direct approach (*sukkha vipassaka*)—a person who straight away begins to reflect on phenomena with insight.

Pursuer of the indirect approach (*samatha yānika*)—a person who first practices concentration, and then insight.

Radical elements (*avinibbhoga rūpa*)—a group of elements that remains unaltered during a chemical change.

Reals (*paramatthas*)—those essences or ultimates in things that do not change their nature under any circumstances.

Rebirth becoming (*uppatti bhava*)—taking birth in the sense, form and formless planes of existence with a body made of atoms born of past-action, resultant thoughts etc.

Rebirth period (*paṭisandhi kāla*)—the rebirth moment.

Rebirth with three roots (*tihetuka paṭisandhi*)—a birth where the individual has the initial thought (*paṭisandhi viññāṇa*) with non-attachment, non-ill-will and non-delusion as roots.

Rebirth with two roots (*duhetuka paṭisandhi*)—a birth wherein beings, such as humans and gods of the lowest heavens, have a rebirth thought with non-attachment and non-ill-will as roots.

Receptor (*dvāra*)—the sensitive element against which the object impinges and so opens the door to the mind (*ārammaṇa dvāra ghaṭṭana*). It is of two kinds: *pancadvāra pañca pasāda rūpa* (five physical sensitive elements) and *manodvāra* (life continuum thought, *bhavaṅga citta*).

Resultant thoughts (*vipāka cittas*)—the conscious effects of past moral and immoral action. Some of them are accompanied by roots (*sahetuka*) and some are not (*ahetuka*).

Roots (*hetu*, *mūla*)—the six mental factors: (three immoral and three wholesome) that are present in thoughts and act in the manner of roots to trees in their own conditioning; also called the basic motives.

Rootless rebirth (*ahetuka paṭisandhi*)—two kinds of rebirth: that of the higher worlds (*sugati ahetuka*), and that of the lower worlds (*dugati ahetuka*). The former is with the investigating thought with indifference that is a moral resultant. The latter is with the investigating thought that is an immoral resultant.

Saṃsāra—see CONTINUED ROLL OR ROUND OF LIVES.

Secondary elements (*upādāya rūpa*)—the 24 physical elements that remain when the primary elements are left out. They are so-called because they are dependent on the primary elements.

Sense cognition (*viññāṇa dhātu*)—a thought such as eye cognition, ear cognition, etc., with which the sense object is

immediately cognized. This is similar to the elementary sensation in western psychology.

Sensuous happiness (*āmisa sukha*)—the pleasures of seeing, hearing, etc., or those feelings dependent on the senses.

Sign—see CONCEPTUALIZED IMAGE (*paṭibhāgga nimitta*).

Sign of destiny (*gati nimitta*)—one of the manifestations seen at the time of death. It is some attribute of the plane in which the next birth will take place.

Six fields (*salāyatanas*)—the five physical sense bases with the mind base as the sixth.

Stream winner saint (*sotāpanna*)—one who has attained the first stage of saintliness in Buddhism. This person will never again be born into the lower worlds.

Sublime thoughts (*mahaggata cittas*)—a term covering the thoughts of the form and the formless planes. So-called by contrast with thoughts of the sense plane that are lowly (*paritta*).

Subtle elements (*sukhuma rūpa*)—the elements when the gross physical elements are left out. See GROSS ELEMENTS.

Subsequent genesis element (*santati rūpa*)—the birth phase of every atom succeeding the initial one of its class.

Supersensuous happiness (*nirāmisa sukha*)—a happiness that is aesthetic, *i.e.*, detached from the sensations.

Supramundane (*lokuttara*)—transcended or gone beyond the mundane. (The mundane is characterized by the nature of break-up or ceasing, conditioned or existing with cause; compounded or existing with others as the units.) The term 'that which has crossed the mundane' stands for *nibbāna*; and 'that which helps in the crossing' stands for the path and the fruition thoughts.

Supramundane thoughts (*lokuttara cittas*)—the four paths and the four fruition thoughts that have *nibbāna* as the thought object.

Symbol of the deed (*kamma nimitta*)—one of the signs presenting itself to the mind at the time of death. It is some symbol of a powerful act (moral or immoral) done earlier.

Synchronous kamma relation (*sahajāta kamma paccayā*)—the causal relation whereby volition conditions its own thought unit and the atoms born of thought. Thus it conditions ideo-motor action.

Temperamental types (*carita*)—six types of personalities: the lustful (*rāga carita*), the angry (*dosa carita*), the foolish (*moha carita*), the confident (*saddhā carita*), the intelligent (*buddhi carita*), the discursive (*vitakka carita*). There can be combinations of them. Also a division of personalities as deep and shallow. See PERSONALITY.

Ten devices (*dasa kasina*)—devices used to induce concentration in respect of the four primary elements; the four colors of blue, yellow, red and white; space, and light.

Ten foul states (*dasa asubha*)—meditations on a dead body changing into the loathsome states such as the body undergoing discoloration, torn by vultures and wolves, worm infested, skeleton, etc.

Ten reflections (*dasa anussati*)—meditations on the Buddha, the Dhamma, the Saṅgha, morality, liberality, celestial beings, death, the body, peace and respiration.

Ten sense cognitions (*dvipañca viññāṇa*)—two thoughts (*kusala* and *akusala*) for each of the five senses, that arise without volitional control to cause the elementary sensations on meeting with the object.

Terminal kamma (*āsanna kamma*)—the act done when nearing death.

Terminal thought process (*maraṇāsanna javana vīthi*)—the last thought process of a life in which there are only five impulsion thoughts. The object of these thoughts is one of the death signs, and is taken through one of the six avenues.

Three marks (*tilakkhaṇa*)—three features characteristic of all mundane phenomena, whether they be matter or mind. They are impermanence (*anicca*), unsatisfactoriness (*dukkha*), and soullessness (*anattā*).

Trance (*jhāna*)—a state of absorption in a moral object as to cause a dispelling or burning up of the defilements, the chief of which are the hindrances. In a trance, the mind is able to stay long on the object. Trances are of two kinds: the mundane, and the supramundane.

Tranquility meditation (*samatha bhāvanā*)—concentration meditation on any of 40 subjects, with an ultimate aim of procuring of a state of peace or tranquility by the suppression of certain defilements, chiefly the hindrances.

Triple mind element (*manodhātuttika*)—a term for a group of thoughts called the mind element, consisting of the apprehending-at-the-five-senses and the two recipient thoughts.

Unconscious beings (*asañña sattā*)—beings who have by the power of trance caused a rebirth in which there are no thoughts but a succession of atoms of past-action and energy. They remain like statues, and at the end of a long period of time they again get a rebirth thought and normal life with conscious activity.

Unwholesome thoughts (*asobhana cittas*)—a term for the immoral and the rootless thoughts. So-called because they do not have any of the wholesome mental factors.

Verbal intimating elements (*vacī viññatti rūpa*)—the atoms generated by thoughts that enable a person to express his thoughts and ideas by means of speech.

Visualized image (*uggaha nimitta*)—the stage in a trance meditation when the image of the object persists even when the eyes are closed.

Volitional activities (*saṅkhāras*)—mental conditioning, of three kinds: moral (*puññābhi saṅkhārā*), immoral (*apuññābhi saṅkhārā*), and imperturbable (*anenjābhi saṅkhārā*); also referred to as formations or formulations.

Weighty kamma (*garuka kamma*)—a powerful act whose effects are not long delayed. On the immoral side are the five evils (*pañcā nantariyak*), and on the moral side the trances (*jhānas*).

Wholesome mental factors (*sobhana cetasika*)—the 25 mental factors that are found in wholesome thoughts, (moral, resultant, and inoperative with roots).

Wheel of life—an explanation of the process of conditioning of thoughts, feelings, and matter by which the past, present and future lives are linked.

Wholesome thoughts (*sobhana cittas*)—thoughts that have in them wholesome mental factors. They include resultant and inoperative thoughts with roots.

Worldlings (*puthujjanas*)—those beings who have yet to undergo the training by the paths, *i.e.*, to become saints or *ariyas*. They include those who have acquired the mundane trances (*rūpa* and *arūpa jhāna*).

WESTERN TERMS

Accompanying characteristics—those which though present are not needed for the purpose of giving a label or name.

Aesthetics—the scientific and philosophical study of the creative arts. An analysis of the principles according to which a work of art is evaluated.

Affection—term for feeling and emotion. The adjectival form "affective state" or "affective association" refers to mental states characterized by feeling.

Animism—the belief that all objects in nature, animate and inanimate, possess or are the abodes of souls or spirits.

Association—the meaningful relations and interconnections that arise among psychological activities and states, *e.g.*, ideas, feeling, and bodily movements.

Associationist psychology (*vide* WARREN) —study that traces the varied aspects of individual experience to the operation of association. The "laws of association" go back to Aristotle (*e.g.*, laws of similarity and contiguity) and have been modified by others such as HUME, HARTLEY and BARN (see WARREN) to include laws of primacy, recency, frequency, and so on.

Automatism—the way in which complex activities of animal and human organisms of the non-reflex type are performed without conscious guidance. Classical behaviorism in certain respects represents a form of automatism.

Automatic—complex actions performed without personal awareness, consciousness or volition such as automatic drawing, automatic speaking, etc.

Behaviourism the school of psychology founded by J.B. WATSON in 1913, which abandons the concepts of mind, consciousness, etc., and the method of introspection, and restricts psychology to the empirical study of behavior as overt responses to stimuli. Thus, thinking and emotion were

regarded by Watson as forms of overt behavior—thinking was sub-vocal speech, and emotion was a visceral reaction.

Cause—anything so related to a succeeding event that in the absence of the former the latter never appears. During the renaissance, cause was conceived as an object. Today it is sometimes interpreted as energy or action, whether or not connected with matter.

Causal laws—generalizations specifying relationships of necessity and sufficiency between objects, events, conditions, etc. at a given time and those at later times.

Causal nexus—the relation between two successive phases of an event in a causal series.

Censor—a selective agency of mind which prevents some painful memory or impulse from reaching consciousness a term used especially in psychoanalysis.

Chromosome—the molecule taking part in cell division which carries the genes, the carriers of hereditary traits.

Clair-audience—perception of sounds and words uttered at a distance but not perceptible to the auditory sense organs.

Clairvoyance—visual perception of real objects not within the range of the visual sense organs.

Cognition—a generic term covering all processes involved in knowing. Included in it are the processes of perceiving, remembering, imagining, judging, reasoning, etc. It is one part of the tripartite classification of mind, the other two being conation and affection.

Complex (psycho-pathology)—a group of ideas, tendencies, or experiences strongly tinged with emotion which are partly or entirely repressed.

Conation—the processes of striving or desiring, or the mental state accompanying a voluntary act.

Conflict (psycho-pathology)—opposition between contradictory impulses or wishes producing emotional tension, due to a repressed unconscious wish being prevented from becoming conscious.

Connector—that part of the nervous system whose function is to connect the receptors of the sense organs and effectors of the muscular and glandular systems.

Consciousness—the distinguishing feature of mental life variously defined, *e.g.*, capacity for having experience, awareness, capacity for knowing the external world, etc.

Consciousness, field of—totality of experience at a given time. The total field consists of (*a*) the focus where the concentration is maximal and (*b*) the marginal or peripheral fringe with a diminishing degree of attention.

Consequence theory—idea that says the rightness and the wrongness of an action depends upon the effects.

Defining characteristics—Objects, events and phenomena have a large number of characteristics, but there are those without which a thing cannot be identified or separated from other similar or related things. Defining characteristics refer to the latter.

Drive—a condition within any organism, instinctive or learned, which provides the stimulation or motive force for the goal-directed behavior of the organism, *e.g.*, drive for food, water, and sex.

Dynamic psychology—a systematic account of behavior and experience with emphasis on human motivation and changes in behavior. Behavior is viewed from the point of view of the complex interplay of various drives and motives, conscious and unconscious.

Denotion—words standing for a class of things.

Designating—characteristics which a thing must have in order that a word can be supplied to it.

Dynamism—a philosophic system which in contrast to the philosophy of mechanism, adopts force rather than mass as its basic explanatory concept.

Effector—an organ of the visceral system such as a muscle or gland that carries out the response to a stimulus from the sensory nervous system.

Eidetic image—an image usually visual, almost photographic in its fidelity and recognized by the subject as subjective.

Emotion—a complex mental state or experience in which there is a strong degree of feeling which is often characterized by intense motor activity, *e.g.*, bodily changes. Also viewed as a central characteristic of instincts (*e.g.*, MCDOUGALL's theory of instincts), and, in psychoanalysis, regarded as the dynamic expression of the unconscious instincts.

Empirical psychology—system based on experience by observation and experiment, as contrasted with rational psychology based on deduction from *a priori* principles.

Epiphenomenalism—a theory of the mind-body relation which views mental processes as by-products of basic physical processes, and having no independent causal efficacy.

Epistemology—a branch of philosophy which deals with the theory of knowledge, its origin, structure, and the validity of knowledge.

Existential philosophy—a strictly non-metaphysical, anti-hypothetical system giving only a simple description of psychological realities.

Existential psychology—a school of psychology which limits its study to description, analysis and classification of experience, *i.e.*, its sensory and imaginal aspects, together with feelings as observable mental processes.

Extravert—a type of personality in which one's interests are directed outwards, *i.e.*, toward the external environment and social phenomena rather than inwards toward oneself and one's own experiences and feelings.

Extra sensory perception (E.S.P.)—Perception without use of the known senses. A generic term covering phenomena of telepathy, clairvoyance, precognition, etc.

Functional psychology—a systematic interpretation of mental phenomena as ongoing activities and processes rather than static, inert, experiences. It sometimes also emphasizes the role of mental phenomena in adjustment to one's environment, *i.e.*, it considers the biological utility of experience.

Gestalt psychology—the school of psychology which holds that all mental processes and experience presents themselves phenomenally as forms, or structures (in german "gestalt(en)") which are functionally indivisible and, if incomplete, tend to their own completion as a whole. Applied to behavior, it denies that the whole or total response to a situation is made up in an additive manner of elementary units, of responses to elements, of the situation. The classical application of this view was in the field of perception but it has influenced other fields such as learning, cognition and motivation.

Hallucination—a disorder of perception in which, objects or situations not actually present to the senses are experienced and reacted to as if they were present.

Hedonism (psychology)—the theory that man's actions are determined primarily by pleasure seeking and the avoidance of pain or unpleasant feeling. In ethics, it refers to the view which holds that personal pleasure is the ultimate end of all conduct.

Hormic psychology—same as PURPOSIVE PSYCHOLOGY.

Idealism—the system of philosophy which makes ideas rather than matter in space the ultimate reality of the universe. There are different types of idealism, *e.g.*, subjective idealism, the view that the world exists only as an order of ideas in a society of minds (BERKLEY & WARD), etc.

Ideomotor action—responses which follow upon thought processes.

Illusion—a mistaken interpretation of a sense impression such that it does not represent in experience the actual objective situation. Contrasted with hallucination in which the abnormal perception has no basis in objective reality.

Illusion of memory—memory is distorted by the inclusion of elements in the original perception.

Imageless thought—an idea, thought, or train of thinking devoid of any sensory contents.

Indian philosophy—many systems such as vedanta, sankya, yoga, mimansa, nyaya, vaisesika and jainism.

Insight—the direct apprehension of form, meaning or general truths; in gestalt psychology it means the sudden awareness of the meaning or relevance without recourse to previous experience; and in psycho-pathology it means the awareness of one's own mental processes or self-knowledge.

Instinct—an innate disposition to respond selectively to stimuli of a certain class of objects, to experience some emotional excitement, and be impelled to act in a particular way in relation to that object.

Instinct (delayed)—an instinct which does not operate till some time after birth.

Integrated personality—one who understands himself and does not allow himself to be torn between conflicting tendencies and has molded his character on life experiences.

Interactionism—form of the dualist theory of the mind-body relation which implies a two-directional or reciprocal causal influence between mental processes and bodily events.

Intrinsic good—being good in itself, or desirable for its own sake regardless of other relations.

Introvert—a type of personality, whose psychic energy is directed towards oneself, one's own thoughts and feelings rather than the outside world; often accompanied by some degree of social withdrawal and daydreaming.

Logical positivism—a highly empirical system of contemporary philosophy, which emphasizes the logical and semantic analysis of language, and admits of only knowledge that is factual and verifiable against experience.

Materialism—the theory that matter is the only reality; psychic processes are reflections or ultimately identical with physical brain events.

Mechanistic theory—dynamic interpretation of phenomena as belonging to a machine-like system, *i.e.*, one in which events are constant and regular. Usually contrasted with vitalism in biology.

Mendelism—a theory of inheritance based on Mendel's law.

Mendel's law—the principle of hereditary transmission where parent characteristics are transmitted without change to the offspring in units that may be dominant or recessive. Also proposes that a pattern of inheritance operates according to a definite ratio called the Mendelian ratio.

Mental chemistry—a term used by J.S. Mill and others to signify that the mind is not a passive agent in receiving and compounding ideas; *i.e.*, the mind actively enters into these activities and adds something of itself to the resultant.

Metaphysics—that branch of philosophy which deals with the ultimate nature of things. Sometimes refers to

philosophy in general. Metaphysics is usually divided into ontology and cosmology.

Mind-stuff theory—the view that minds are constituted of psychic particles analogous to physical atoms in matter.

Mood—an enduring but not permanent emotional attitude.

Nerve impulse—an excitatory process travelling along a nerve fibre when it is stimulated.

Nexus—see CAUSAL NEXUS

Noumenon—the object of non-sensuous intuition, the antithesis of phenomenon. Its existence is theoretically a problem but must be postulated by practical reason.

Noumenal world—the real world as opposed to the phenomenal world. Kant believed that this real world cannot be known.

Occasionalism—a metaphysical theory in which mind and matter are non-interactive, but events in one realm occur in correspondence with events in the other realm due to the intervention of God who determines when a specific event will occur.

Ontology—that branch of metaphysics which concerns itself with the problem of the nature of existence or being.

Optical illusion—an illusion of visual perception usually affecting spatial relations.

Parallelism—a theory of mind-body relations according to which conscious processes and brain or neural processes vary concomitantly without either affecting the other causally.

Parapsychology—The investigation of psychological phenomena, such as telepathy, clairvoyance, auto-kinesis, which is based on knowledge not originating from the known senses. (see E.S.P.)

Perception—the awareness of ordinary sense objects distinguished from (*a*) sensation, the experience of isolated sense qualities, which is regarded by some as the most elemental unit of consciousness; and (*b*) from higher ideational qualities such as memory and reasoning.

Phallus—male sex organs. Phallic, in psycho-analysis, means a symbolic representation of the male sex organs.

Phenomenon—appearance or that which appears, *e.g.*, see Kant, in contrast to noumenon or that outside experience and therefore unknowledgeable.

Phenomenology—the systematic investigation of phenomena or conscious experiences especially as they occur immediately in experience; used technically for the philosophical method of Husserl. This is closely allied to introspective psychology.

Philosophy—the branch of learning that investigates the nature of knowledge and of existence.

Positivism—the doctrine which limits knowledge to the facts of experience and holds that problems of ultimate reality do not come within the scope of science (from Comte.)

Pragmatism—the doctrine that the ultimate test of right and truth must be looked for in terms of practical consequences, or that "the whole meaning of a conception expresses itself in its practical consequences". (WILLIAM JAMES).

Psi—a term to designate both E.S.P. (see E.S.P.) and P.K. (see P.K.) activities

Psycho-kinesis—(abbrev. P.K.) A term for the action of the mind upon the body as to bring a motor change in the environment.

Psychosomatics—refers to normal and abnormal bodily symptoms which arise from mental states; comes from mind (*psyche*) and body (*soma*).

Purposive psychology—according to McDougall, the view which asserts that the human organism actively strives towards a goal, and that this purpose or the striving towards a goal is itself an active determinant of goal-directed behavior.

Realism—a view that objects of sense experience have real existence independent of their being known. There are different types of realism.

Receptor—a sensory nerve ending which is specially adapted to be sensitive to certain types of stimuli. Receptors are classified as exteroceptors when they are found on the surface of the body, and as proprioceptors, when they are embedded in muscles and bodily tissues.

Reflex—the direct and immediate involuntary response of an effector or group of effectors to the stimulation of a receptor connected to the effector by means of a nerve pathway.

Repression—a mental process by which ideas and impulses painful to consciousness (the ego) are forced in the unconscious (the id), and where they still remain dynamic. According to psycho-analysis, suppression refers to a similar process of conscious inhibition, whereas repression is essentially an unconscious process.

Sciences, **philosophy of**—the systematic study of the nature of science and scientific thinking, especially, its methods, its concepts, and presuppositions. Considered as a specialized branch of philosophy, and traditionally regarded as synonymous with scientific method.

Semantics—the systematic study of the evolution and meaning of words.

Structural psychology—the method of analyzing mental phenomena by describing the constituent elements of conscious experience, *e.g.*, sensations, ideas and feelings, and showing the way in which they are integrated.

Subconscious—processes of which the individual is not personally aware, *i.e.*, dimly or marginally conscious, but accessible to consciousness under special circumstances, as under hypnosis.

Substantive—William James' term for those aspects of experience with sufficient definiteness and stability over time to be observed and denoted by nouns, verbs and adjectives. Contrasted with transitive (or relative) states which are not easily observed and are usually denoted by relational words such as prepositions, conjunctions, etc.

Suppression—see REPRESSION.

Sublimations (psycho-analysis)—a term for an unconscious process by which instinctual energy, *e.g.*, libido, or energy of the sex instinct, is re-directed or channeled to socially useful and valued goals other than the natural object of the instincts.

Telepathy—direct communication of an image, idea or impulse from one mind to another separated by distance.

Temperament—the general affective nature of an individual which is largely determined genetically.

Transitive states—see SUBSTANTIVE STATES.

Unconscious—ordinarily refers to activities of which an individual is unaware at a given time. In psycho-analysis, it refers to certain dynamic processes, not ideas or thoughts but wishes, impulses, etc., which cannot reach consciousness nor can be voluntarily brought into consciousness. The unconscious (id) is, nevertheless, always an active determinant of behavior and experience.

Vitalism—the biological doctrines (*e.g.*, of DRESCHIS or BERGSON) which asserts the operation of a non-material entity (entelechy or *elan vital*) as a causal agent in human evolution and the regulation of behavior.

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